

[Transcript] All-In with Chamath, Jason, Sacks & Friedberg / E122: Is AI the next great computing platform? ChatGPT vs. Google, containing AGI & RESTRICT Act

Oh, Jay Cal's here. Hello, Jay Cal. Hey, how are you? Thanks for showing up. I've been here the whole time

I was just that. Oh, I was just having some of

These beautiful salted roasted pistachios. The only problem is when I went to the store. I kid you not. There was a shelf of these

All flavors available except one flavor. Salt and vinegar. Sea salt vinegar. The entire we move the market

We move the market. I am not kidding. I

Go to the fancy, you know bespoke

The railies went to the railies and truckie. I went to the railies and truckie the artisanal and they have you know

All these over all it's called artisanal. That's what I said the art stuff the artistic food the artisanal

Row where they had this I

Kid you not spicy salty no salt every shelf packed

Then there's one shelf I can see straight through to the ice cream and not see something and I look at the tiny little sign

Salt and vinegar shelled nuts sea salt and sea salt and vinegar

Chumat's shelled nuts

Sold out across the country, you know, I cannot recommend these more highly. They're incredible

I can't recommend you're not smart. They are delicious. My salty nuts are delicious. We open

sources to the fans and they've just gone crazy

Did you see Joe Manchin's high-heater op-ed in the Wall Street Journal? Oh, oh my god

Yep, Joe Manchin went for it. Would Joe Manchin's running for president? He is I think okay, so let me ask sacks right there sacks Joe Manchin

Nikki Halley

And who's the guy from Florida? That's your question. By the way, there's a big defection that was leaked this week

Ron louder flip from Trump to to Santas. That's a big one because louder is good for a

Lot of money five to ten million at least Joe Manchin. What impact would he have coming into the race?

I'm not drawing him to look for your honest opinion. Well, it depends how he comes in. What did he say in the op-ed?

He was talking about the insincerity of the Biden administration to control costs and how everybody was incompetent

And it certainly there's some waste and we can control some spending and everybody needs to grow up and get in a room and just

Manage the budget for the American people and stop playing politics

Yeah, I think the headline of the article actually to your point J. Cal was much worse than the substance of the article sacks

But if you see the headline, I don't know Nick if you can just throw it up there. It was brutal

The headline and the byline of the article. I think was more damaging than the substance of the article

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Biden's inflation reduction act betrayal instead of implementing the law as intended his administration subverts it for ideological
Ideological ends. I have to think that Joe was responsible for that for the titling of that article
You know, he would get permission to approve it, right?
And by the way, I think if you guys remember we talked about this when that act was first published
And if you guys remember, I think I pulled up the CBO data the CBO model
And it showed for the first five years this thing burns a couple hundred billion dollars
And then there's some expectation that there'll be some sudden boom and revenue in the out years
And then you make the money back in the out years
So it's total like accounting shenanigans for him to have made the claim in the first place that the
IRA was actually going to be
Like a net deficit reduction or debt reduction. In fact, it's all just accounting shenanigans and it's
just a massive spend package
Particularly in the near term when it matters most, I think I told you guys this but I think this was
like
When was the last time I was in Washington? Probably what is it March now? So maybe it was
January I was there
and
I saw
Schumer and Mark Warner and I spent about two hours with Manchin. He is really impressive
He's cool. He's interesting. He's thoughtful. He's moderate
Manchin's like a formidable guy. So this will be really interesting if he steps in there and
Manchin where do you write your check? I've probably write a check to both to be honest feels like a
good ticket to me
I've always wanted to see the the cross could you imagine a Democrat and Republican merging
somehow and like running together the greatest
My god, I've been pitching that for years. I think that's like a my god clear path
David Friedberg may have just come up with one of the most disruptive ideas in American politics.
It's ever been floated. Oh
My god, I mentioned Halley. Halley Manchin dreaming. Yeah, just to my comment on this
So first of all, I remember when you know Manchin did a good job stopping Biden's three and a half
trillion dollar build back better
Remember it was him in cinema that were the holdouts. Yeah, but then
Manchin compromised and gave Biden a 750 billion dollar version of it
And I guess now he's complaining that Biden didn't live up to his end of the bargain and doing the
deficit reduction
but quite frankly
many commentators said at the time that the bills claims to deficit reduction were
Preposterous and that would never happen. So quite frankly, you know, Manchin shouldn't have
been Eucard or
hoodwinked by Biden and everyone was basically saying there'll never be any deficit reduction out of
this bill
It's just more spending. So I don't really feel bad for Manchin here saying that somehow he was

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betrayed by Biden

He should have known better. Now in terms of him running

Yeah, I think as a Democrat who's figured out how to get himself elected in West Virginia, which is a plus 20 red state

He obviously knows how to appeal to the center

The problem for him is just how do you get the Democratic Party nomination?

Because he's far to the right of your average Democratic Party voter if he wants to run as an independent

That's a different story and that would really throw a curveball into the race, but I don't see him doing that

I think it's kind of a stretch and this is the problem with a lot of these fantasy candidates is that

You know

Centrist or moderate voters might like them, but they can't get the nomination their party

And unless you like Trump and Obama those were fantasy candidates. I don't think so

I mean Trump was not a fantasy candidate. He's the ultimate. Well, he was an outsider

But he appealed to the base of the party. He appealed to the base of the party

What I'm saying is in order to get the nomination of a major party who have to appeal to its base

And I don't think Manchin appeals to the base of the Democratic Party. He's out of step with it

He's out of step with it in ways that I like don't get me wrong

But I just I don't see how he's gonna get a nomination Chris Christie. What do you think of him?

Seems like he's about to come in the race to David

Pointless viable

He's just he's just clutter. Okay pointless

All right, listen everybody. Welcome to the all-in podcast

It's like episode a hundred something with me again today the rain man himself. Yeah, David sacks is here

Friedberg is in his garden at his home in Paris spring has sprung the queen of quinoa and

Of course the dictator himself Chamath

Polyhopitia the silver fox look at that little tuft of silver hair so distinguished

I got a haircut from somebody recently who said that people go to her and

Ask her to put the silver thing in their hair

Really? I

Don't have to worry about that. Yeah

It looks like he's in a smurf village there. What is what is that background background? That is a scene from

Okay, I like most of my backgrounds. Oh my god, wait a mood in the moment of the week

You guys just totally totally denied half the beta males in the YouTube comments from being able to guess what the background

Thanks a lot for them

Actually, I did a reverse image search and then I used a chat

GPT plug-ins a lot to automatically figure out. I didn't know that was the game background each week. Oh

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Alright, well, let's get started. Come on. Let's get started. Okay, listen
I look at sacks. I gotta get out of here. I got the alpha spoken the alpha. It feels like he's in a good mood
I like this welcome to the world's greatest podcast
Open AI launched a bunch of chat GPT plugins and I
Don't know if you saw it
But David sacks wrote a blog post with chat GPT. It's an amazing back-and-forth. I
Read this back and forth explain what you did sacks. This was really like one of the best
Conversations I've seen with chat GPT. I'll pop it up here on the screen, but yeah
well, I had an idea for a blog post about
The use of a I guess tactic you could call give to get I thought it would be a
Interesting tactic for AI startups to use if they're trying to get a hold of proprietary training data
So for example, if you wanted to create an architect AI you need a lot of plans
Or if you're gonna create like a doctor AI you need a lot of lab results or medical reports to train the
AI on and those are
Hard to get open AI doesn't necessarily have them yet. So there is an opportunity I think for startups
to create
These AIs and different you call them professional verticals. So the gift to get technique would be
you give points to your users for uploading that data
And then they can spend those points by using the AI and anyway, the the company that came up
with this gift to get
Tactic was a company called jigsaw
Almost 20 years ago. No one remembers this company. I'm kind of dating myself because I
remembered it
But I just had this idea. Gee, I wonder if the jigsaw approach could be used for AI startups
So I started by going into chat GPT and I said, hey, have you heard of jigsaw?
And then it had and then I said tell me about its gift to get, you know approach and then I said would
this approach work for
AI startups that want proprietary training data sets and I said yes
This is a good idea and then I gave the architect example and I said, can you give me more examples
like this?
And it gave me like 20 more examples and
Then I asked it just to flesh out various kinds of details
I went down some cul-de-sacs that I didn't use and then at the end I said, can you summarize
everything?
We've just talked about in a blog post and it gave me the first draft of a blog post
I then did a substantial amount of editing on most of the blog post although some of it
I just use verbatim and then I had a couple of people on my firm look at it
They made some good suggestions
So it's not like the humans completely out of the loop and then I copy and pasted my edited version
back into chat
GPT said here's my edit and then I asked for some suggestions and made a few small
edits and I said okay great just incorporate the edits yourself gave me that final output and then I

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posted on sub-stack a
Blog that probably would have taken me a week to research and
Write if I done it at all. I was able to do in a day and I can't see myself going back now
I think this is just how I'm gonna write all my blog posts is is use
chat GPT as my researcher as a writing partner some cases an editor
But I'm definitely gonna run it through the thing that I was struck by was
Just how kind and generous and thoughtful this conversation was and I just thought I've never seen
sacks have a
Conversation where he was so kind to the other person and thoughtful right about now all your
friends and family are like
How do we get sacks to have this conversation with us?
You were super kind to the AI because it's not a person. It was a robot. Oh
Well just in case it takes over the world J. Cal you can't be too too careful, but no, I think listen, it's
important to give the AI
Once got into things from
Part scroll up and show that example the AI actually gave me some information about jigsaw's point
system
Again, the rewards that they used. Yeah, and it was just in text
So I said down below. Hey, can you spit that out as a table and it did instantly?
It's like a place work right like you would have to have an analyst or research into a days where it's
incredible
And then I just screen shot of that and I made it an exhibit. Thank you. Well, yeah, it was like
delightful back to you
I mean this is a yes
This is a literal road to you
Being a kind human being like all the money that you've spent on therapy and
Just trying coaching to be nice to people. You're just nice naturally
Sacks is in a good mood today. I don't know why you're
He's laughing come on. It's fun. You have to be it's funny sex saying thank you to the AI
Perfect. This is confirmatory what we know David wants to live in a set of highly transactional
relationships
Ideally with a machine. Who can then eventually help him make him money?
Can I ask you a question of sincerity sacks? Did you what did you enjoy more working with your
team of humans on this or working with?
Chat GP which one was more enjoyable for you. Just personal
Well, I think they're both were I would say that the human contributions were essential. So
Okay, it's not about enjoyment. This is you know, it's about this is just a job to get done, but
But it definitely spent things up enormously
I personally find the hardest part of writing a blog is when you're staring at that blank sheet of paper
and
Just having to like spit out the first thousand words. Yes
It's just so time-consuming to do that
But again, if you start with the first draft, even if it's not very good, then you can just edit it and it

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speeds up a lot
Yeah, it's great for ideation
But the people in my firm were important. Yeah, I
Actually trusted it. I know that you probably should fact-check it in a way because it can hallucinate
But the things that we're saying made so much sense to me that I didn't think it was hallucinating
Well, this is a great moment to pivot into
What open AI did with plugins these came fast and furious this week and a bunch of folks who had
you know
started verticalized chat GPT based projects MVPs were like, oh, maybe my project MVP is now dead
because
Instacart OpenTable Shopify slag zappier and zappier obviously like if then this then that is a
Very wide-ranging tool that allows you to connect APIs from a multitude of sources
And what this all lets you do at the end of the day is have chat GPT
Paying one of these sources just like an app might do or some custom software might do ping the
API and
Return data. So hey, what tables are open on OpenTable?
Maybe Shopify
Fifty things to buy in this category, etc. And so people have started building
Little scripts. We used to call these when magic leap was out
Internet agents and the concept of a software agent that's existed for a long time actually in
Computer science, I'm sure free Burkett will give us some examples of that
But also chat GPT can now use a browser. So that means you can get around the dated
nature of the content in the corpus
Somebody did things like hey, build me a meal plan book me a reservation for Friday night in
OpenTable source other ingredients and buy it for
Saturday night on Instacart and then use something like will from Alfa
To, you know, calculate the calories, etc. So when you saw all this drop
sacks, what did you think in terms of
the opportunity for
startups and to build these
Intelligent agents things that will do if then if this then that or just background tasks
Over time and you could actually leave them running. Yeah, I mean, I think this is the most
important developer platform
since
The iPhone and the launch of iOS in the app store and I would argue maybe ever
In our industry certainly since the beginning of the internet
I think there was a question when chat GPT launch on November 30th and people start playing
within December
What exactly open AI's product strategy was going to be was this just like a proof of concept or a
demo and they even kind of
called it like a demo and
And initially it looked like what their business model was going to be was providing an intelligence
API that other

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websites other

Applications could incorporate and we saw some really cool demos like that notion demo of other applications incorporating AI capabilities

And so initially it looked like

What open AI was going to be was more like stripe where in the same way that stripe made payments functionality available very easily through a developer

Platform they were going to make AI capabilities available through their developer platform

And then I think a funny thing happened on the way to this announcement

Which is they became the fastest growing application of all time talking about chat GPT

Over a hundred million users in two months. Nobody else has ever done that before. I think it took the iPhone

You know two years plus

Gmail Google

Those products all took I think well over a year

So this became the fastest growing site of all time and I think with plugins what they're indicating is that they will

Become a destination site. This is not just a developer platform

This is a destination site and through plugins. They are now incorporating the ability to basically

You know anything you could do through an application you will now be able to do through a plugin

You'll just tell chat GPT what you want done if you say hey

Book me a plane ticket on this date. It will go into kaiats plugin and do that

You say book me a plane ticket and then an Airbnb for this trip of Siri and Alexa realized because those

Were very rigid. They had no intelligence right Friedberg

You if you if you wanted Siri to do something specific like use ways or to go get you an open table

It needed to be pretty specific and it didn't have any kind of natural language model behind it

So this is taking existing APIs and putting a natural language layer in front of it

Which makes it you know perform a little more naturally. Is that what we're seeing here for you, Bert?

I think it provides access to a corpus of data and

A suite of services that are not well integrated into a search or chat interface anywhere today so

You know knowing what restaurants have what seats available is in a closed service

It's an it's in a data warehouse

Operated by open table and now what open table can do is provide an API into that data

Via an interface and they can allow chat GPT to make a request to figure that data out to give a response to a user

Where they can ultimately benefit from transacting and allowing a service

This closes the loop

Between search and commerce in a way that Google cannot and does not do today and I think that's what makes it very powerful

We've seen this

Attempted in a number of important ways in the last couple of years with Alexa and Apple home and

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Google home kind of integration
via the chat

Services that they offer, you know where you speak to the device

But the deep integration that's possible now and the natural language way that you can go from the request all the way through to the

Transaction is what makes this so extremely powerful and I think

You know the points I made a few weeks ago when we first talked about you know search

Having so many searches that are done where the human computer interface presents a table or presents a chart

Or presents a shopping list in a matrix. That's what makes search such a defensible product

I think could theoretically be completely obviated or destroyed with an interface like this where you can write the ability for chat

GPT or whatever the core centralized services to actually present results in a table in a matrix in an interface in a shopping list and

Actually close the transaction loop

It's really disruptive to things like commerce providers. It's really disruptive. You know some of these commerce platforms

It's really disruptive to a lot of different industries

but also introduces a lot of real opportunity to build on top of that capability and that functionality to rewrite and

Ultimately make things easier and better for consumers on the internet

What do you think Chamath you're looking at this and it seems to be moving at a very fast pace over a hundred million users

They put a business model on it already 20 bucks a month

They have a secondary business model of hey use the API and will charge you for usage

And then you layer on what Zappi are and if this than that had already sort of established in the world

Which is API's but nobody ever really wanted to write scripts. So that seemed to be the blocker you go into Zappi

Or if this than that it's four or five percent of the audience people who want to customize stuff people who want to tinker

But this seems to now with the chat GPT chat interface open it up to a lot of people

So is this super significant or is this a commodity product that?

You know 10 people will have we're sitting here next year on all-in episode 220

I think you are asking the exact right question and you use the a great term

Like in poker if there are three hearts on the board and you have the ace of hearts

You have what's called the nut blocker

Right, which means that nobody else even if anybody else has a flush

They never have the best flush and if flush is the best hand

There's a lot of ways that you can manipulate the pot and eventually win the pot because you have that ace of hearts and nobody else has it

the concept of blocker I

Think is very important to understand here

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Which is what are the real blockers for this capability to not be broadly available?

So I think you have to segregate you have the end user destination

you have the language model and

Then you have the third-party services and so if you ask the question, what is the incentive of the third-party service?

well the shareholders of

a

Travel site right

They're not interested in doing an exclusive deal with any distribution endpoint. They want their services integrated as broadly as possible

Right, so I think the the answer for the service providers is

Just like they build an app for iOS and for Google and you know if they could have justified it

They would have built an app for a gaming console. They can they should they would they do right?

So that's going to get commoditized and broadly available. I

Think on the LLM side. I think we've talked about this

Everybody's converging on each other. In fact, there was an interesting

Article that was released that said that there was a handful of Google engineers that quit because apparently Bard

was actually

learning on top of

Chat GPT which they felt was

Either legal or unethical or something right so so the point is I think we've talked about this for a while

But all of these models will converge in the absence of highly unique data right what I've been calling these white truffles

So if you can hoard white truffles, your model will be better

Otherwise your model will be the same as everybody else's model and

Then you have the distribution endpoints of which there are many whose economic incentives are very high, right?

So Facebook doesn't want to just sit around and have all this traffic go to chat GPT

They want to be able to

Enable Instagram users and WhatsApp users and Facebook users to interact through messenger or what have you?

Obviously Google has a you know, many hundreds of billions of reasons to defend their territory

So I think all of this to me just means that these are really important use cases

as an investor I

Think it's important to just stay a little patient

Because it's not clear to me that there are any natural blockers, but I do think that David's right that it's demonstrating a use case

That's important

But it's still so early we are six weeks in yeah, I tell you I think there's a couple of great blockers here

Or there's going to be an M&A bonanza for Silicon Valley if you look at certain data sets reddit

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stack overflow for programming and

And Cora these things are going to be worth a fortune and to be able to buy those or get exclusive licenses to those if you're maybe

Google barred or if you're a chat GPT that could be a major difference maker Twitter's data set obviously and

Then you look at certain tools like Zapier and if this and that they've spent a decade building the sort of

You know meta API that would be an incredible blocker. I think this is going to be like a bulk on the station

I'll be honest you all sources you're ready for free. They didn't plug in free. Exactly. Yeah, I was just gonna say

I don't think these are not blockers. I don't think this is the ace of hearts on the flush board

I don't think so. I think that these things are really interesting assets. They are definitely troughly in nature

But they may not be the you know, 10 pound white trouble for now though that we're looking for you know

But on the M&A side, don't you think this would be like incredible?

No, but the only reason I say that again is it is just so early like I in the text

I mentioned this to you guys. I remember and

Saks and I were in the middle of this

We were both right at the beginning of social networking Saks started genie

I was in the middle of aim and all of a sudden we saw Reed start social net then we saw

Friendster get started then we saw my space get started and you have to remember when you look back now 20 years later

The winner was the seventh company, which was Facebook not the first not the second

It was the seventh which started two and a half years properly after the entire web point 20 phenomenon started

Yeah, same with search by the way where Google was probably 20 exactly to the scene

Yeah, excite like us if you want to be a real student of business history

I'll just say something that's more meta, which is if there's something that I've learned on the heels of this SVB fiasco

is that there is an enormous

Amount of negative perception of Silicon Valley and frankly a lot of disdain for

VCs and prognosticating technologists, right? And I think that so you have to be podcast. I

Think we have to be very careful

Yeah, and I do think that we are an example of that because we are the bright shiny object of the people that were successful and

The broad

Makeup of America thinks that we're not nearly as smart as we all think we are and after all of this money

That's been burned in crypto land and NFTs and all of this web three nonsense

To yet again whip up the next hype cycle. I think doesn't serve us well

So I do think there's something very important here, but I think if we want to maintain

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Reputational capital through this cycle

Because government will get involved much faster in this cycle. I think it's important to just

Be methodical and thoughtful iterate experiment, but it's too early to call it

I guess is what I would say. Yeah, it's definitely too early to call it

But sacks you're saying explicitly you think this is bigger than the internet itself bigger than mobile has a platform shift

It's definitely top three and I think it might be the biggest ever

I think look I think things could certainly play out the way that Jamath is saying

However, I actually think that open AI has demonstrated now with these platform features that it has a

Lead a substantial lead and I actually think that lead is likely to grow in the next year

And let me tell you why I think it's got a couple of assets here that are hard to replicate

So number one user attention. I think they've now got I would guess hundreds of millions of users and this thing is

Caught on like wildfire must have been beyond their wildest dream

I think it even surprised them how much this has taken off

It's really captured the public's imagination and people are discovering new use cases for it every day

If you are sort of the the number two or number three or the seventh large language model to basically get deployed

Behind a chatbot. I just don't think you're gonna get that kind of distribution

Because the novelty factor will have worn off and people would have already kind of learned to use chat GPT

So number one is the hundreds of millions of eyeballs number two is with this developer platform

I think we should describe a couple of other features of it

one of the problems with chat GPT if you've used it is that the training data ends in 2021 and

So you very rapidly for many questions get to a stopping point where it says like I don't I don't know the answer to that

Because I don't have any information about the last two years

Well, one of the plugins that open AI is introduced itself is called the browsing plug-in and it allows Chat GPT to go search the internet and not just run internet searches

But to run an internet search as if it were a human. So you ask

You ask chat GPT a question and it goes to find it runs out a search

And then it scours through the list of 20 links and it doesn't stop until it finds a good answer

And then it comes back to you with just the answer

So it actually saves you the time of clicking through all those loops and it'll give you the browsing history to show you what it did

That's mind-blowing. They also have a thing called a retrieval API

Which allows developers to share proprietary knowledge bases with chat GPT

So if you have a company knowledge base or some other kind of content

You can share with chat GPT so that chat GPT can be aware of that and there are some privacy concerns

But the company has said they're gonna sandbox that data and protect it as an example. I'm

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planning on

Writing a book on SAS using chat GPT and I'm gonna put together all the previous articles and talks I've done as a database so I can then work with that and chat GPT. So you're gonna have more and more developers

sharing information with

Chat GPT

You're gonna have chat GPT able to update its training based on sort of the last two years be able to search the internet

And I think that as those hundreds of millions of users use the product and as developers keep sharing more and more of these data sets

The AI is gonna get smarter and smarter and then what's gonna happen is both consumers and developers are gonna want to use or build on

The smartest API. Yeah, so this is where it feeds on itself. I mean, yeah, I think there might be a I Agree with much of what you're saying

But I do think somebody like Facebook when they release their language model

Which they're about to is not going to allow chat GPT to have any access to the Facebook Corpus of data and then

LinkedIn will do the same. They'll block any access to chat GPT to their data. And so then you might say, you know what?

I'm doing something related to business and business contacts

I need to use the LinkedIn one and they're just gonna block other people's usage of until you hey

You have to come to our interface and have a pro account on LinkedIn and this all becomes little islands of data

And so I'm not sure that you may be right. Yeah, it's too early to have a definitive opinion

But I would say you have to believe plugins are going to be promiscuous

Yes, there's actually plugins or the refutation of your idea. Facebook does not have an API Twitter turned off their API people who are

The biggest companies Cora doesn't let people use its data

So I just picked three those are three incredible data sets that don't allow people and Craigslist doesn't so people who are smart

Do not allow APIs into their data. They keep it for themselves

I think there were a lot of people when the app store rolled out that swore up and down

They never build a mobile app because they didn't want to give Apple that kind of power that the internet was open

Whereas the app store is closed and curated by Apple and sure enough

They all at the end of the day had to roll out apps even though in the case of Facebook

It definitely has made them vulnerable because they're downstream of Apple. I mean Apple

Now has enormous influence over Facebook's advertising revenue because the users have to go through Apple

They never had to do that before at the internet

Nonetheless Facebook felt compelled to release a mobile app because they knew was existential for them if they didn't and I believe

That was happening is I don't think it's read analogy the right analogy would be Google search

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Does Facebook does Craigslist allow their data to be indexed inside of Google search answers? No, right?

They block that for a reason they and they will write a cease and deceased letter

Fine so so you know what those guys will stay out of it

But look how much content Google search already has and I think that chat GPT will start by eating a substantial portion of search

Because again, you don't have to go through the 20 links. It just gives you the answer

It's going to eat a substantial portion of browser usage and app usage because you're just going to tell chat GPT

What you want to do it will go book your plane ticket. It will go book your hotel room

Yeah, see this is another that want to play in this

Hold on the apps that want to play in this will benefit

So there'll be a powerful incentive for applications to get an advantage by participating

Let me finish my point. Yeah, and then eventually

They will be forced to do it not because they get an advantage

But because they're so competitively disadvantaged if they don't participate in that ecosystem

I agree that they'll participate in it. But here's the thing

What's going to happen is Google is going to turn on bard and I've been playing with bard

It is 80% of chat GPT already and then when they make bard a default

You know a little snippet on your google search return page or bard is built into youtube or chrome or android all the play store

They're going to roll right over chat gpt because they have billions of users already

So this advantage that you see today

I see that getting rolled real quick because you'll be on youtube

And on the top right hand side will be bard and when you do a search

It's going to say here are other sentences you could do

Oh, you want to search mr. Beast

When he's helped people or mr. Beast when he's given away more money or people who've copied and been inspired by mr

Beast all that's going to occur inside of youtube and chat gpt is not going to have access to the youtube corpus of data

And then when you do a search, it's going to be the same thing

It's going to be on the right hand side and it's going to be playing just like it is in bing

If you turn on your android phone, they're going to make google assistant go right into bard

And google assistant is already used by hundreds of millions of people. So I think that google will roll

I think they're going to roll chat gpt. I don't know who's going to win

but i'm looking at this saxipoo more

Reductively as a capitalist, which is what are people's incentives because that's what they'll do

google's incentive is to

To usurp chat gpt's usage by inserting something

Inside of their existing distribution channels

To suppress the ability for you to want to go

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To the app
Known as bundling
I think facebook has that same incentive
Oddly, even though microsoft is such a deep partner
I think certain assets of microsoft have that incentive
You're talking collectively about five or six trillion dollars of market cap then when you add in alexa and
amazon and
siri and apple
What is their incentive? I don't think their incentive is to let this happen
And I think if you look at the slack microsoft teams example of even a better engineer product who's excellent and widely deployed
Even at hundreds of millions of users doesn't much matter when it's
More cleverly
Distributed and priced and so those things again
And you may still be right all i'm saying is it's just so early to know
And as slow and lumbering as some of these big companies are
They are not so stupid as to kill their own golden goose and or defend it when threatened
So I think you just have to let it see what happens
I want to finish the point on google and then we can move on to the bundling thing
Let me just make the counter argument
Which is that I think google was caught completely flatfooted here
Even though they shouldn't have been because they published the original paper on transformers in 2017
They should have seen where all of this was going, but they didn't open ai
Use that paper and commercialized it
And the proof of that is there was just a lawsuit a couple of days ago or at least a claim by a
Former employee of google who quit
Because he said that they were using chat gpt to train
their ai
So their ai is so far behind
They were violating the terms of use hold on they were violating the terms of use of open ai to train
Their own ai on chat gpt. That's not a good sign. That's not a good sign. I also think hold on sense
Hold on. I'm just being the counter argument here. I mean don't dismiss it out again. Give me a
chance to explain it more over
Chat gpt 4 which was just released a few weeks ago
We know that open ai had that they were using it internally for seven months
So the state of the art is not what we're using. It's what open ai has internally
They're obviously working now on chat gpt 5 and so if you're saying that bard is 80 percent of chat
gpt 4
Well, I got news for you. It's probably 50 percent or 20 percent of chat gpt 5
And who knows what the product roadmap is inside of open ai. I am sure that they've got
200 ideas for things they could do to make it better and lowing fruit

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But look regardless, I think the pace of innovation here and development is going to speed up massively

I mean there is going to be a flurry of activity. I agree

It's hard to know exactly how it's going to play out

But I think this idea that oh, it's a foregone conclusion. These big companies are just going to catch up with open ai

I I think that there's a strong counter argument. That's not the case. I'm making a very specific argument

It's not a foregone conclusion where all the value will get captured just like in any of these major title waves

If you make the bets too early

you typically don't make all the money

and

It tends to be the case and it has been in the past at least with these transformative moves

It's sort of in the early third of the cycle

Is where the real opportunities to make the tons of money emerge

And there's a lot of folks that show you a path and then just don't necessarily capture the value

I'm not saying that that's going to be the case here

All I'm saying is if history is a guide all of these other big waves

Have shown that fact pattern and so I'm very excited and I'm paying attention

But I'm just being circumspect

With this idea that you know having been in the middle of these couple of waves before it

I made all the money by waiting a couple years. I don't know if that's going to be true this time around

But right that's sort of my posture right now like you obviously have a point because we're only four months in

So how can we know where this is going to be in five years? So you could be right to your point sacks?

I think it's clear

And this is you know big ups to the open ai team that they will be one of the top two or three players

Absolutely, we all agree on that which is extraordinary in itself and the top four players freeberg are obviously going to be

Microsoft open ai we'll call that like

whatever that little, uh, you know

pairing and then google

Facebook and then we haven't talked about apple, but obviously apple is not going to take this sitting down and hopefully

They'll they'll get in gear and have siri, you know make it to the next level or they'll just put her out to pasture if you were to look at those

four

And we're sitting here a year from now

Who has the best product offering?

Who has the biggest user base just take a minute to think about that because you were at google and

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we all know

The the word on the street is

It's the return of the kings

Larry and sargey are super engaged by all reports every back channel everybody I talked to was saying that they're every day

They're obsessed with google's legacy now and making this happen. So what can you tell us in terms of?

Who you think a year or two from now will have the biggest user base and be the most innovative Amongst that quartet or maybe you think there's other players who will emerge the advantage that open ai has which is the advantage that any

Call it emerging

You know advantage competitor has

Is yeah outsider is that the incumbents are handicapped by their current scale

Much of the consideration set that google has had

In deciding what features and tools to launch with respect to ai over the last couple of years

Has been driven fundamentally by a concern about public policy and public reaction

And I know this from speaking to folks there that are

close enough to kind of indicate like

google has been so

targeted has been such the point of attack

by governments around the world with respect to their scale and monopoly and monopolistic kind of Behaviour as some people have framed it privacy concerns, you know

Etc etc the fines in the EU are extraordinary

That so much of what goes on at google today is can I get approval to do this?

And so many people have felt so frustrated that they can't actually unleash the toolkit that google has built

And so they've been

Harnessed and focused on these internal capabilities. I think I mentioned this in the past but things like

What's the right video to show on youtube to keep people engaged?

What's the right ad to show

To increase click-through rates etc etc

Versus building great consumer products for fear of the backlash that would arise and government's coming down on them

and they shake this and ultimately attacking the the revenue and

The core revenue stream and this is no different than any other kind of innovator's dilemma

You know any other business of scale and any other industry historically ultimately gets disrupted

Because their job at that point is to protect their cash flow and their revenue stream and their balance and their assets

Not to disrupt themselves, especially as a public company

Especially under the scrutiny and the watchful eye of governments and regulators. So I think google has

In aggregate probably good competitive talent if not better talent than open AI and others

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Google has arguably the best corpus of data upon which to train
The best capabilities the best toolkit the best hardware user the lowest cost for running
These sorts of models the lowest cost for serving them
Etc. Etc. So frankly, they're way behind the battle is theirs to lose
If they are willing to disrupt themselves and this is the moment
That Larry and surge should wield those founder shares that they have and they should wield the
comments that they wrote in that founder's letter
That they will always make the right decision for the long term for this company
Even if it means taking a cost in the short term and disrupting themselves
This is the moment to prove that those founder shares were worth
You know the negotiation to get there
And and I think that it is going to require a real degree of scrutiny a real degree of regulatory
uncertainty a real degree of
Challenge by governments and public policy people and perhaps even a revenue hit in the near term
To realize the opportunity, but I do think that they're better equipped to win if they chose to well
said
Well, really well said. I think the founder share insight is particularly interesting sacks the fact that
By the way, sorry, I did nothing with them. Gochema. Yeah, I know it's no
I was just going to say the exact same thing. It's like if they don't use it now
What would it take and when?
Yeah, this is good yet another
Yet another case of the emperor has no clothes just a power grab by Silicon Valley execs
Which was meaningless because if in this moment you don't wield that power
And break that company into bits as you need to what was the point of having it? They need to come
in
And say we're going to give barred results to 10% of users guys
And ask them to give feedback on it because who has worse queries than just one point. I want to
make that for reberg
Who has more?
Reinforcement learning than google that search box is everywhere and people write question after
question and gmail and google docs etc
I mean, they have so many people asking questions and youtube might be the the transcripts of
youtube
Every video and the image of every video bananas and the comments under it
You know the comments under the video you have the transcript of what happened in this video
And then what was the question and answer underneath it?
Let me make the counterpoint
Please to my own point like look at how Gersner came after Zuck
So Zuck had his point of view his strongly held belief that AR VR was the future of the platform
That's what he wanted to bet into that's what he wanted to lean into it's what he wanted to build the
company against
He did it and then the financial analysts and the investors came at him and said
This is a waste of money focus on making money. You have a responsibility to shareholders

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F those founders shares you don't deserve that 10x voting right or whatever the framing might have been to get him to say

You know what? I acquiesce. I'm giving it up

And I think that we should also think about what's going to happen on the other side google is a trillion plus dollar market cap company

Their shares are owned by every public endowment public pension fund

Institutional investor owns google in their portfolio

So the backlash against google making a hard bet like this

And potentially destroying billions of dollars of cash flow in the process every year

Will not be easy to do that the same sorts of letters that gersner at all and obviously we love gersner

You know we can all defend him all day long

at zuck is what might may end up happening with

With alphabet if they did choose to go this path sacks

What do you think here about the founders shares specifically in google's chances of disrupting themselves and

You know just putting this into every product

And shoving it down users throats and catching up

Well, I mean with all due respect to larry and surga. I mean they've been on the beach a long time

That's a lot of beach time. This reminds me of apollo crete coming out of retirement in uh, rocker four

Get a lot of shape

A lot of a lot of fans there, but uh,

They could be a little out of shape

Sam Alvin may not look like i'm in drago, but but this this is a lot of

This is one shrewd character. This is one shrewd character. I mean altman is fit. He's fit. He's been in the arena

Yeah, he's you know, he's a multi-time founder who sat at the top of yc and got to see everything that worked

Yep, and got to see all the research and he's been plugging away at this for

What like the years

So there's a there's a big I just think there's a big gap to catch up on now

The google has all the resources in the world and they've got a lot of proprietary assets too

And they've got all the incentive in the world

So do I think that google will be one of the top four players in ai? Absolutely

But this idea that is going to come in steamroll open ai. I have a prediction

I got a prediction within next year larry and surga take the title of co CEOs

And then they do a demo day where the two of them get on stage

Stop and they actually do the demos of these products if that happens

That's fictional quantification. That's it. That's listen and base us is going to run for president

Those are my two predictions. Stop. I'm taking a lot of predictions. Can you imagine if larry freeberg?

Where are the chances of larry and surga taking co CEO slots?

That's prediction one and then prediction two

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Where are the chances of them running the next google IO?
Where they get on stage and they walk people through all the products that they shepherded
And that they have a vested interest in that they're they want to demo there is an institutional problem at google
At the top level which does need to be solved
Which is this position of constantly being in defense
against the scrutiny again of regulators and public policy folks and and
You know all these different groups that are against google
And so as a result that the kind of cultural seasoning
Particularly the executive and the board level has been one of like, you know protect the nest
Don't overreach don't overstep and
And it's a real
You know, I think one for the for the business school books or whatever
Ultimately is what they end up doing about it because now is you know the time when that defensive posture is really kind of putting the
The entire business at risk the same thing happened to microsoft remember in the late 90s
That's right when they got crushed by that antitrust lawsuit. It made them very defensive
Well that can know but that consent decree they put they had a wartime CEO come in balmer came in
and
You know followed by kind of an innovative guy who could kind of continue to build
And I think that there may be a moment here. I look I love sundar
He's a he's a great guy great CEO sundar. I don't know if I guys if I ever told you this
He and I started at google on the same day. We're both in the same nuclear class
We were the freaking hat on the tgif day and on stage. He was a product manager and now he runs the company
I think the question is like how whether it's the ceo or the broader hold kind of executive org or the board
A degree of disruption necessary to shift that cultural seasoning is so necessary right now
For them to have a shot at this and similar to what you just said sacks like you're going to need a bomber type moment
To kind of you know reinvigorate that business
And by the way, I'll tell you it's an important point when bomber took over during that period after gates when they were on their heels
he basically
Just focused on revenue and paying dividends and stock buybacks and the stock went sideways
And he missed mobile and now
Yeah, it's a good point. Yeah, you know wait you're here forgetting one big thing
Which is that that was also because he had to operate under a consent decree to the doj
Exactly
So the product managers of microsoft were placed with lawyers from the department of justice and you had to get their sign off before you could ship anything
so

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we have to remember that those things probably slowed microsoft down as well and
The great thing that satya had was
A blank slate and the removal of that consent decree. So he was able to do everything that just made
a lot of sense
And he's executed flawlessly
I think the problem at google is not sundar or larry or surge
I think it's more in the deep bowels of middle management of that company
Which is that there's just far too many people that probably have an opinion
And their opinion is not shrouded in survival
Their opinion is shrouded in elite language around what is the moral and ethical implications of this
and where
Has this been properly tested on the diaspora of 19 different ethnic tribes of the amazon?
That's the kind of decision making that is a nice to have
When you are the second or third most valuable technology company in the world
But you have to be able to pause that kind of thinking and instead get into wartime survival mode
And it's very hard. So it doesn't almost matter
At this point what sundar wants the real question is what is the capability of middle management to
either
Do it or get out of the way and I think that in all of these big companies that struggle
What you really see is an inability for middle management to get out of the way or
Frankly just you need somebody to then fire them
And if you look at folks who get their groove back
Let's see what facebook does
What are they targeting? They're targeting middle management if you look at
What elon does in the companies that he owns
There is virtually no middle management
But it's like get out of the way
Build product build product and ship it
Yeah, and what is the core truth and so if failure is there in front of you and if David is right that you
have 200 million users come out of nowhere
Who are voting every day with their time and attention?
To use an app and that doesn't create a five-or-long fire where you get middle management out of
the way
And you are the senior most people talking to the people doing the work and shipping things every
day. You're you are toast
You are toast a lot of people are starting to think we're moving a little bit too fast when it comes to
open ai's
Incredible performance, which had gpt4 the plug-ins and all this and so the future of life institute
which was formed in 2015
It's a nonprofit
That's focused on de-risking major technology like ai
They did a petition titled pause giant ai experiments and open letter a bunch of computer scientists
a bunch of computer scientists assigned this letter

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and

The letter quote says we must ask ourselves should we let machines flood our information channels with propaganda and untruth

Should we automate away all the jobs including the fulfilling ones?

Should we develop non-human minds that might eventually outnumber outsmart obsolete and replace us?

Should we risk loss of control of our civilization a number of notable tech leaders like elan steve wasniac?

And a handful of deep-mine researchers have signed it. What do you guys think of the ladder?

Are we going to slow down or not and then we could ask the question generally how close are we getting to agi?

Which is what everybody's scared of is that these agents start working with each other in the background to do things

That are against human interest. I know it sounds like science fiction, but

There is a theory that when these ai's

Start operating on their own like we explained in the previous sort of segment here with

Plugins and they make agents that are operating

Based on feedback from each other

Could they get out of control and be mischievous and then work against human interest?

So what do you think sex? I think there's a difference between

What could happen in the short term and then what could happen in the long term?

I think in the short term everything we're seeing right now is very positive

And let me just give you an example. There was a really interesting tweet storm

About a guy who wrote about how chat gpt saved his dog. And did you guys see this?

This is one of the really mind-blowing ones to me

Use cases so his dog was sick took him to a vet vet prescribed some medication three days later

A dog still sick in fact even worse

so

The owner of the the pet just

Literally copied and pasted the lab result for the blood test for the dog with all the the lab values

Into chat gpt and said what could this be like what's your likely diagnosis chat gpt gave three

Possible answers three illnesses the first one was what the vet basically had diagnosed with so that wasn't it

The second one was excluded by another test

So he then went to a second vet and said listen. I think my dog has the third one

And vet prescribed something and sure enough dog is cured saved

So that's really mind-blowing that even though chat gpt has been specifically optimized

As far as we know for lab results it could figure this out

The reason I'm mentioning this is it gives you a sense of the potential here to cure disease to you know, like I could see

major medical breakthroughs

Based on the ai in the next five or ten years now the question is like what happens in

The long term you know as the ai gets smarter and smarter and we are kind of getting

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Into the normal science fiction, but here would be the scenario is you're on chat gpt 10 or 20 or whatever it is or maybe some other companies ai And the developers asked the ai hey, how could you make yourself better now do it? Which is a question we ask chat gpt all the time in different contexts And so chat gpt will already have the ability to write perfect code by that point. I think you know code writing is one of the I think of its superpowers already So it gives itself the ability to rewrite its code to auto update it to recursively make itself better I mean at that point isn't that like a speciation event doesn't that very quickly lead to the singularity if The ai has the capability to rewrite its own code to make itself better And you know won't it very quickly write billions of versions of itself And you know it's very hard to predict what that future looks like now I also don't know how far away we are from that that could be 10 years 20 years 30 years whatever But I think it's a question worth asking for sure is it worth slowing down though sacks should we be pausing because Based on what you said, you know, I think you framed it properly When these things hit a certain point and they start reinforcing their own learning with each other Well, they can go at infinite speed, right? This is not comparable to human speed. They could be Firing off millions billions of different I think you're right scenarios. We're definitely now on this fuck around find out curve Yeah, and so there is only one way to really find out which is Somebody's going to push the boundaries the competitive dynamics will get the better of some startup They'll do something that People will look back on and say well That was a little that was a bridge too far So yeah, we're just just a matter of time Yeah, I think we're not going to slow down I actually think it's going the other way I think things are going to speed up and and the reason they're going to speed up is Because the one thing Silicon Valley is really good at is taking advantage of a platform shift And so when you think about like all the vcs and all the founders, you know, everyone accuses us of being lemmings And so when there's like kind of like a fake Platform shift or people kind of glommons something that ends up not being real Everyone's kind of got egg on their faces But the flip side of that is that when the platform shift is real Silicon Valley is really good at throwing money at it. The talent knows how to go after it And they keep making it better and better And so that's the dynamic we're in right now. You look at 70% of the last yc class was ready. All AI startups I'm sure the next one will probably be 95%

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so
95% so I think that we're on a path here where the pace of innovation is actually going to speed up
Companies are going to compete with each other. They're going to seek to invent new capabilities
And I think the results are going to all be incredibly
positive
For some period of time like, you know, the vet example, we're going to cure
Illnesses we're going to solve major problems. They're positive then we
Invest more we trust more
But the paradox of that as chamath is pointing out freeberg is if we trust it more we invest more
Then some person in a free market is going to say, you know what? I need to beat chat gpt
Therefore i'm going to take the rails off this thing
I'm going to let it go faster and take off some constraints because I need to win and i'm so far behind
How do you feel about that scenario that sort of chamath and sacks teed up freeberg? I think there's
like
Gpt 3 I think ran on 700 gigs. Is that right?
cheap does anyone know what gpt 4 runs on it's got to be on some number that's you know, not too
not not
many multiples of that but
Look
Someone could make a copy of this thing and fork it and develop an entirely new model. I think
that's what's incredible
about software and digital technology and also kind of you know
Means that it's very hard to contain
Similar to like what we've seen in in biology ever since biology got digitized through DNA
sequencing
I'm the ability to kind of express molecules through gene editing
You know, you can't control or contain the ability to do gene editing work at all because everyone
knows the code
Everyone can make crisper cast molecules. Everyone can make gene editing systems in any lab
anywhere
Once it was out it was out
And now there's hundreds of variants for doing gene editing many of which are much improved over
crisper cast 9
I use that as an analogy because it was this breakthrough technology that allowed us to precisely
Specifically edit genomes and that allowed us to engineer biology and do these incredible things
where biology effectively became software
And remember crisper cast 9 gave us effectively a word processing type tool find and replace
And the tooling that's evolved from that is is much better. So whatever is underlying
Whatever the parameters are for GPT-4 whatever that model is
If a close enough replicant of that model exists or a copy of that model is made
And then new training data and new evolutions can be done separately
You could see many many variants that kind of emerge from here. And I think this is a good echoing
of chumov's point

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We don't know what's ultimately going to win
Is there enough of a network effect in the plug-in model as sacks pointed out to really give open ai the sustaining competitive advantage?
I'm not sure the model runs on 700 gigs. That's less data than you know fits on my iphone
So, you know, I could take that model I could take the parameters of that model and I could create an entirely new version
I could fork it and I could do something entirely new
With it. So I don't think you can contain it
I don't think that this idea that we can put in place
Some regulatory constraints and say it's illegal to do this
Or you know try and
You know create ip around it or protections around it is realistic at this state
The power of the tool is so extraordinary the extendability of the tools are so extraordinary
So the economic and you know the various incentives are there for you know
Other models to emerge and whether they're directly copied from someone hacking into
Open ai servers and making a copy of that model or whether they're
You know open sourced or whether that someone generates something that's 95 as good and then it forks and
A whole new class of models emerge. I think this is like
It's sacks pointed out
Highlighting the kind of economic
market uprooting social uprooting potential and many models will start to kind of come to market
What do we think the impact of white collar jobs getting annihilated by this technology if that in fact comes to pass
I want to say one thing on this. Yeah, look, well, let me just share and I just give one example here
So here's a reddit post that
I was made aware of earlier this week. I lost everything that made me love my job through mid-journey overnight
I am employed as a 3d artist in a small games company of 10 people
Our team is two people who basically explains
He says since mid-journey version 5 came out. He's not an artist anymore nor a 3d artist
All they do is prompting photoshopping and implementing good-looking pictures
And he basically says this happened overnight and he had no choice. His boss also had no choice
He says I am now able to create rig an animated character that's spit out from
mj
Mid-journey in two to three days before it took us several weeks in 3d
The difference is that he cares about his, you know job and for his boss. It's just a huge time money saver
He's no longer making art and the person who was number two in the organization who didn't make as good content as him
Is now embracing this technology because it carries favor with his boss
And he ends basically saying
Getting a job in the game industry is already hard

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But leaving a company and a nice team because ai took my job feels very dystopian. I doubt
It would be better in a different company also
I am between grief and anger and I am sorry for using my gosh your art fellow artists
This is yet another reason that
Figma really needs to close this acquisition from adobe. I mean, it's like the value of these apps are
just getting gutted
If you take a workflow management tool for things like design and imagery
And you reduce it by an order of 90 percent. It's like what is that app experience worth?
And how
Could you replicate it if you were a big company that already has distribution? That's one comment
But what I would tell you jason to answer the white collar question is I think there are a handful of
companies you need to look at
exclusively
because they will be the first ones to really figure out how to displace human labor and that is
TCS so tata consulting services
Accenture cognizant these are all the folks that do coding for higher work at scale
I think Accenture has something like 750,000 employees
So the incentive to sort of squeeze op-acts to create better utilization rates to increase profitability
Is quite obvious. It always has been they will be the first people to figure out how to use these tools
at scale
Before the law firms or the accounting firms or any of those folks
Even sort of try to figure out how to displace white collar labor
I think it's going to be the coding jobs and it's going to be the coding for higher jobs
That companies like Accenture and TCS so those business processing do for other people developer
For kind of folks they're going to need
Half as many people 25 percent as many people we're going to find out the efficient frontier. Yeah
I see it a different way. I mean
This argument that productivity leads to job loss has been made for hundreds of years
And it's always been refuted when you make human beings more productive
It leads to more prosperity more wealth growth more growth
And so yeah, it's easy to think about in a narrow way the jobs are going to be displaced
But but why would that be it's because you're giving leverage to other human beings to get more
done
And some of those human beings really anybody with a good idea
Is now going to be able to create a startup much more easily
So you're going to see a huge explosion in creativity in startup creation
New companies new jobs imagine think about the case of you know, zuckberg founding
Facebook at harvard. He wrote the first version himself. Maybe with a couple of friends
That project happened and turned into a giant company because he was able to self execute his idea
Without needing to raise venture capital or even recruit employees
Even really before forming a company anyone with a good idea is going to be able to do that soon
You're going to be able to use these ai tools. They truly will be no code
You'll be able to create an app or a website just by speaking to some ai program in a natural

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language way

So more flowers will bloom more startups will bloom more projects now

Now now we'll create it will create. I think a lot of dislocation

But for every testimonial that is like the one that you showed which I think is I'd say a little bit overly dramatic

I have seen 10 or 100 testimonials

From coders on twitter or other blogs talking about the power that these new tools give them

They are like this makes me a 10x engineer

Right and he and especially these like junior engineers who write out of school who don't have 20 years of coding history

They get superpowers right away

Like it makes them so much better

Let me give you a response to that guy so so and using sax's point

That guy's saying what used to take me weeks

I can now do in two to three days

And I feel like my work is gone and that's because he's thinking in terms of his output being static

And if he thinks about his output being dynamic

He can now in the matter of three weeks instead of making one character

He can now make a character every two days

So he can make 30 characters in three weeks

That's an alternative way for him to think about what this tooling does for him and his business

The number of video games will go up by 10x or 100x or 1000x

The number of movies and videos that can be rendered in computers can go up by 10x or 100x or 1000x

This is why I really believe strongly that

At some period of time

We will all have our own movie or our own video game ultimately generated for us on the fly

Based on our particular interests there will certainly be shared culture shared themes

You know shared morality shared things that that tie all these things together

And that will become the shared experience

But in terms of like us all consuming the same content it will really like you with youtube and tiktok

We're all consuming different stuff all the time

And this will enable an acceleration of that evolution and personalization

I'll also highlight, you know back in the day one human had to farm a farm by hand

And we eventually got the tool of a hoe and we could put in the ground and make

You know make stuff faster and then we the way we got a plow and then we got a tractor and today

agricultural farm equipment

Allows one farmer to farm over 10,000 acres you go to western australia. It's incredible

These guys have 24 row planters and harvesters and it's completely changed the game

So the unit of output per farmer is now

Literally millions of times what it was just 150 years and in that case freeberg. Nobody wants to do backbreaking labor in the fields

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And everybody wants that cheaper food
But in this case, let me just read you one quote that I didn't read in the original reading of this
He says I want to make art that
Isn't the result of scraped internet content from artists that were not asked
And so I think that's part of this is that it's bespoke art, but well, yeah
I do I the one question I had for sacks was
Sacks you we started this conversation. We're saying hey, this is different than anything in terms of efficiency that came before it
This is I'm gonna put some words here, but this is like a step function more efficient
So to the argument of hey efficiency has always
Resulted in you know more ideas and and we found something to do with people's time
Is this time different potentially?
Because this is so much more powerful. This isn't just like a spellchecker
I would say differently
I think and I agree with what jakel is saying because I think that
The thing that technology has never done is tried to displace human judgment
It's allowed us to
Replace
physical exertion of energy, but it has always preserved
Humans injecting our judgment and I think this is the first time
Where we are being challenged with autonomous systems
That has some level of judgment now we can say and it's true again reform on sin that that judgment isn't so great
But eventually and because of the pace of innovation eventually is probably not that far away
The judgment will become perfect. I'll give you a totally different example. You know, how many pilots are there in the world?
Will we at some point in the next 10 years?
want
Folks to actually manually take off and land or will we want precision guided instrumentation and computers and sensors?
That can guarantee a pitch perfect landing every single time in all kinds of weather conditions so that now planes can even have
50x the number of sensors
With a computer that can then process it and act accordingly just a random example that isn't even thought of when we talk about
Sort of where ai is going to rear its head
I think that this judgment idea is an important one to figure out because this is the first time I've seen something that
Is bumping up against our ability to have judgment and what this person was talking about in this mid-journey example is
His judgment has been usurped. Yes. Yeah, I would disagree. I don't know
Yeah, let me just let me just make one point on this
So, you know an image is a matrix of you know data that's rendered on a screen and

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As pixels and those pixels are different colors and you know, that's what an image is
Is it or is it the judgment of the creator?
Well, no, I'm just saying an image in general
So like when adobe photoshop and digital photography arose
Photographers were like this is you know bs. Why are you digitizing photography with analog and beautiful before?
and then what digital photography allowed is the photographer to do editing and to do
Work that was creative beyond what was possible with just a natural photograph taken through a camera
And they're arguably different art forms, but it was a new kind of art form that emerged through digital photography
And then in the early 90s there was a plug-in
Suite called chi's power tools that came out in adobe photoshop
And it was a third-party plug-in set you would you would buy it and then it would work on photoshop
And it did things like motion blur
sharpening pixelation all these interesting kind of like features and prior to those tools coming out the judgment of the digital
Artists the digital photographer was to go in and do pixel by pixel changes on the image
To make that pixel to make that image look blurry or to make it look sharper
Or to make it look like it had some really interesting motion feature
And the chi's power tools created this instant toolkit where in a few seconds
You created a blur on the image and that was an incredible toolkit
But a lot of digital artists said this is automating my work. What is my point now?
Why am I here and the same happened in animation when three when you know CGI came around and animators were no longer animating cells by hand
And in every point in this evolution
There was a feeling of loss initially
But then the evolution of a whole new art form emerged and an evolution of a whole new area of human creative expression emerged
And I think we don't yet know what that's going to look like. Do you think respect to what we're seeing here
You think the
The level of judgment that ai offers you is the same as the level of judgment that chi power tools offered you
Yeah, look, I mean, I think that the person making the judgment or the decision about which pixel to change into what color felt
Like, you know, I have control and I think it's ultimately like I just told her I disagree with you
I mean, I think that this is a magnitude different. I remember it's more than a magnitude different.
Yeah
It's all different tools. It's still love. It's on you. You don't look you and I you and I have sat in spreadsheets
Many times and we've I'm generally happy with this idea. So I'll give you a different example
Today we use radiologists and pathologists to identify cancers. Yep

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There are closed-loop systems. We have one right now. That's in front of the FDA
That is a total closed-loop system that will not need any human input
So I don't know what those folks do
Except what I can tell you is that we can get cancer detection
Basically down to a zero percent error rate that is not possible with human intervention
That is judgment
Right, so I just think it's important to really acknowledge that this is happening at a level that it's never happened before
You may be right that there's some amazing job for that radiologist or pathologist to do in the future
I don't know offhand what that is
But these are closed-loop systems now that think for themselves and self-improve. I get it
But I think that there there is an unfathomable set of things that emerge
We did not have the concept of Instagram influencers. We did not have the concept of Personal trainers. We did not have the concept of like all these new jobs that have emerged in the past couple of decades
That people enjoy doing that they can make money doing that is a greater kind of Experience and level of fulfillment for those that choose and have the freedom to do it
Then what they were having to do before when they had to work just to make money
What do you think that radiologist or pathologist wants to do be a trainer or Pilates instructor?
No, I think we don't know what that's going to look like
All right, you're having the same. Yeah, you have any thoughts on this as we wrap this topic
It's obviously a lot of passion coming out
Yeah, I look at the elimination of white college jobs in a massive way
I think that this is a short term versus long term thing in the short term
I see the benefits of AI being very positive because I don't think it's in most cases wiping out human jobs
This is making them way more productive. You still need the developer
It's just that there are five times or 10x more productive, but I don't think we're at the point in the short term
We're gonna be able to eliminate that role entirely and what I've seen in
Basically every startup I've ever been a part of is that the limiting factor on progress is always engineering bandwidth
That is always the the thing that you wish you had more of totally
It's the product roadmap is always the most competed on thing inside the organization everyone's trying to
You know get their project prioritized because there's just never enough engineering bandwidth
It's really the lifeblood of the company. So if you make the developers more productive
It maybe just accelerates the product roadmap
I just I don't think in the short term that what's going to happen is these companies are going to look to
Cut all their developers because one or two of them can do 10 times the work
I think that they're going to try and accelerate their product roadmaps now

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Again, you have this long-term concern that maybe you don't need developers at all at some point
But I think that
The benefits of developing this technology are so great in the short to mid term that we're going down that path no matter what
And we're just going to have to find out what that long term really looks like and maybe yeah, I completely look very different
I mean once we're in once we get past the short term
We may have a different long-term view
I think in this narrow vertical. I 100 agree with you. Look, I I think that
AI is going to eliminate unit testing. It has already done. So it's going to eliminate most forms of coding
The engineers that you have all of them will now become 10x engineers
So with fewer of them or with the same number
You'll be able to do as much or more than you could have before
That's a wonderful thing and all I'm saying on that specific narrow vertical
Is you'll see at first rear its head in companies like Accenture and TCS because
And Cognizant because they have an immediate incentive
To use this tooling to drive efficiency and profitability. That's rewarded by shareholders
It'll be less visible in other companies. So but what I am saying though is that you have to think about the impact
on the end markets for a second and I think that AI
Does something that other technology layers have never done before
Which is supplant human judgment in a closed loop manner
And I just think it's worth appreciating that there are many systems and many jobs that rely that rely on human judgment
Where we deal with error bars
And an error rate that a computer will just destroy and blow out of the water
And we will have to ask ourselves
Should this class of job exist with its inherent error rate
Or should it get replaced fully by a computer which has no error rate?
And I think that's an important question. That's worth putting on the table
Okay, so let's wrap here. I just have my final thought on it is like you're going to see entire jobs
Categories of jobs go away. We've seen this before phone operators travel agents
Copy editors illustrators logo designers accountants sales development reps
I'm seeing a lot of these job functions in the modern world like phone operators previously
I think these could wholesale just go away and they would just be done by AI
And I think it's going to happen in a very short period of time
And so it's going to be about who can transition
And some people might not be able to make the transition and that's going to be pain and suffering
And it's going to be in the white collar ranks
And those people have more influence. So I think this is could lead to some societal disturbance. I do agree with you sacks

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I'm going to learn pilates and be an influencer. That's it
But I do agree with sacks that the software development backlog if this is what you're saying is so great
That I don't think we'll see it in software development for a decade or two
There's just so much software that still needs to be made. All right last week
We talked about tiktok and this first bipartisan hearing we've seen in a long time
and people actually
I think framing correctly exactly how dangerous it is in my opinion to have tiktok in the united states
And of course
Then we get the great disappointment of the actual bill
The restrict act was proposed by senator mark warner democrat virginia on march 7th
The problem with it is is it seems like it's poorly worded
that
There will be civil penalties and criminal penalties to americans for breaking
The law and using software that's been banned and many people said, you know
This probably is just bad language. I have a question. Yeah, does it does this apply to incognito mode?
Because if it doesn't
No, they're saying they're saying that you can get
You know, you can get fined or 20 years in jail or whatever it is
For using a vpn to vpn to tiktok frieburg. What are your thoughts on it?
Look, I think this is a real threat to the open internet
I'm really concerned about the language that's been used that basically speaks to protecting the safety and security of the american people
By actively monitoring network traffic and making decisions about what network traffic is and isn't allowed to be transmitted across the open internet
It's the first time that I think in the united states
We are seeing like a real threat and a real set of behaviors from our government
That looks and feels a lot like what goes on in china and elsewhere where they operate with a closed internet and internet
That's a controlled monitored observed tracked and and gates are decided by some set of administrators on what is and isn't appropriate
And the language is always the same. It's for safety and security of the people
The entire purpose of the internet is that it did not have bounds that it did not have governments
That it did not have controls that it did not have
Systems that are politically and economically influenced that the architecture the internet was and always would be open
The protocols are open the transmission of data on that network would be open
And as a result all people around the world would have access to information of their choosing and it allowed ultimate freedom of choice
You know, this this kind of is the first of what i'm concerned creates a precedent that ultimately leads to a very slippery slope
Saying that tick tock cannot make money in the u.s. By charging advertisers or managing commerce

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flows is one thing

That's where the government can and should and could if they chose to have a role

But I think going in and observing tracking internet traffic and making decisions about what is and isn't appropriate for people

I think is one of the things that we all should be most concerned about what's going on right now

There is no end in sight to this if you allow this to happen in the first time

You know vpn's virtual private networks allow you to anonymously access internet traffic and and
And access internet traffic via remote destinations

So so that the ultimate consumption of content that you're using

Can't be tracked and monitored by local agencies or isps

And I think that saying that that can now be restricted takes away all ability to have true privacy and all rights

Uh to privacy on the open internet

So I'd love to talk about this more unfortunately. I got a run

Um, but this is a super threat to me and I I think this is something we should be super

Super concerned about and that the entire community of technology internet and anyone that wants to have you know freedom of choice

Steps up and says this is totally

Inappropriate and overreach. Yeah, there are other ways to manage stuff like this feels like complete overreach sex

Yeah, I agree with this intentional overreach or poorly written or somewhere in between. What do you think both?

I think both. I think this is the biggest bait and switch that washington the central government has ever tried to pull on us

Everybody thinks that they're just trying to ban tick tock from operating the u.s. And if that's all they did

Then I think the bill would be supported by most americans, but that's not what they're doing

They're not restricting tick tock. They're restricting us

That's not the goal here. Yeah, you got a bait switch

It's a huge bait and switch and so just so you know what the act provides is that a u.s. Citizen using a vpn

To access tick tock could theoretically be subjected to a maximum penalty of one million in fines or 20 years in prison or both

now

You know, they'll say, you know, mark warner the

Sponsored legislation will swear up and down that's not the intent

But the problem is that the language of the bill is so vague that some clever prosecutor may want to pursue this theory one day

And that needs to be stopped. Also, there's another problem with the bill, which is you think this is just about tick tock

It's not what they do is

It says here. I guess they don't want to

Mention tick tock by name. So they're trying to create a category of threatening application

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But because it is a category, it's very very broad. So the bill states that it covers any Transaction transaction not just an app in which an entity described in sub paragraph b has any interest

And then entities described in some paragraph b are quote a foreign adversary

An entity subject to the jurisdiction of organizing the laws of a foreign adversary an entity owned director controlled by either of these and then it gives the executive branch the power

power

To name a foreign adversary

Any foreign government regime that one of the cabinet secretaries defines without any vote of congress

So this is giving sweeping powers to the executive branch to declare

You know foreign companies to be enemies like the plot of the uh prequels

Well, emergency powers here we go. You know, we criticize china for having a great firewall. What do you think this is?

Yeah, I mean this this should obviously have nothing to do with the american consumer and everything to do with a foreign adversary collecting data of

Americans at scale

This could be written in a much simpler way. You know what it should be it should be one sentence Which is that app stores are prohibited from allowing tick tock be an app in their store. That's what they do in india

That's it case closed game over. I think it is doing okay, right?

They they block like a hundred chinese apps, and I think their society is still functioning. So

You know all due respect to aoc

You know like the idea that 150 americans million americans are going to suffer because they can't be tracked by the ccp is kind of nuts

This is going to give

sweeping powers to

The security state to surveil us to prosecute us to limit our internet usage

This is basically the biggest power grab and bait and switch

They've ever tried to pull on us and again if they really were concerned about tick tock. It's one sentence. Yeah, we were done

All right, everybody. It's been an amazing episode for the sultan of science david freeberg the rain man himself David sacks and the dictator

Shamath polyhopatea. I am the world's greatest moderator and we'll see you next time. Bye. Bye Oh

We should all just get a room and just have one big huge orgy because they're all

It's like this like sexual tension, but we just need to release somehow

You're

I'm doing