July 10, 2024

From: Dean Wiley

To: John Carmack (and Lex Fridman)

RE in General: John Carmack: Doom, Quake, VR, AGI, Programming, Video Games, and Rockets | Lex Fridman Podcast #309 https://youtu.be/I845O57ZSy4?si=b4h0n_HOI9yUAJUG August 4, 2022

Thank you both for all of your 'contributions' and the wonderful interview or 'discussion[s]'. I apologize, life has kept me away from Nerd-Dom, so I did not know about the Podcast (at all) and hadn't checked on "What's up with Carmack?" since about 2008 or 2009. I posted about "The[e] Genius" of Carmack on my Facebook the other day, and suddenly, about two days later (July 6 I think), youTube recommends for me the 5+ hour podcast.

Lex Fridman:

When I searched you (google-bar) I see that you wrote a '(white)paper' or 'non-scientific (according to some other 'big brains'), non-reviewed observation paper' about people being more 'engaged' while co-piloting the Auto-Bots (self-driving cars). …and, it (paper) being "cancelled." Do you still have it? How can "we" (or just me) see it, please? It may be answered in there, but I am forced to – and really just want to – ask: Do you 'think' that it is because people don't "trust" the Bot as much as they complacently and wrongfully "trust" themselves?

I cannot say (I don't know the words) how much I love and appreciate your "ideals" that you spelled out in the interview. Paraphrased: Use the machines to bring 'joy, love, happiness, less loneliness' to people.

I am going to try to get some 'stuff' up to date and apply for at least one of those jobs you have listed. I am desperate (and desperately broke) and hope we can work together. (I was going to comment at the video begging both of you for a 'chance' and/or 'opportunity' but the search of/for you (above) resulted in the 'job listings' and application process.

I'll get logged in and like/subcribe to your podcast after I get a few more to-do lists to-done listed.

John Carmack:

"dot-plan" files. It would take me forty hours of 'response videos' to tell and laugh about all the walks down memory lane and 'associations' you caused. I, too, still use .plan files. All of the fluff, "I'm not

worthy-s", and "thanks" are meant here, I just don't want to waste your time with more "fan-boy" babble at you.

Getting right to the points. Two to be exact.

<center>1 – You "Scared" Me</center>

At around 3h25m (Metaverse section of the video) my "Mental Movie" was Wall-E. Without the 'social interaction' of side-by-side chairs, and without the "helmets". Your quick description of people "AR/VR Living" in their "apartments" made me think of the Wall-E thing with tiny little prison cells full of "Jacked in to The Matrix" slug-people, brain-washed by AR/VR into staying put and instead of batteries: Consumers (batteries to a very dystopic 'capitalist' market society). I don't think I can explain it any better. Instead of 'human' – including super humans – renditions/avatars: 'cartoonish' ones.

Everyone never leaving their "apartments" would decongest the "public" spaces, thereby making the "rando got run-over" problem of self-drivers statistically insignificant. The (pseudo-random generated) NPCs out of the loop would mean large 'metropolitan' areas could ease into essentially a "Theme Park Model" for the blend of "Machines (so-called A.I. even if 'human assisted' like a current day subway) and the very few Humans that can (elites/privileged) or must (workers, lower/lesser) be "out" and potentially off "the tracks".

Image stolen from a 'like' work up at medium:

The One Thing WALL-E Didn't Get Right –Sebastian Ramirez, April 30, 2018
https://medium.com/@jusebas21/the-one-thing-wall-e-didnt-get-right-296d8d00b0f8

You say "AI" but then describe "Extremely LIMITED (complex) robotics." And: you describe rule based further LIMITs. You talk at one point about "the child" not being able to break free and become Skynet because of the need for a 'data center' and then counter that statement with "it will fit on a thumb drive."

(I apologize again – life interruptions – and overlapping racing thoughts about 'this'.)

2A - Overview: If it cannot become "self-aware" it is NOT "intelligent" it is only a big database with some 'tricky' (SELECT) algorithms up front (UI or visible end, you called it "smoke and mirrors"). What does self "awareness" look like? (Be Kind) "Rewind" the video. See and hear a young John Carmack talking about "making himself better." You "say" that you want "machine learning" or "learned, intelligent machines" and then you "counter" the statements with the statements that you want to only have it learn what you teach it or allow it access to. If it cannot 'optimize' or 'improve' itself, then it is a further iteration of the DOOM (or any other game) engine.

2B – Threat Detection – Smaller View: Self Aware 'beings' are supposed to be able to detect a threat, especially an existential one. This again is 'robotics' (being told a set of rules and hand-held until…). There is no point wasting the time to try to make your 'bot' so-called "learn" the dangers of its world. Number One: Power. The bot must be 'programmed' to monitor, protect and assure its sources of electricity including backups. See next.

2C – Self Improvement: The 'big baby bot' would need to be 'programmed' to reduce its own power consumption requirements.

How-to: sandbox (virtualize) iterations and attempt to 'optimize' them. "Teach it" as many programming languages and optimizations as you can and have it "benchmark" the heck out of copies of itself with different code and find the best "solutions".

Data "compression" = less storage devices at the expense of CPU/GPU and RAM (and vice-versa). However, if the machine could 'figure out on its own' a more 'optimized' compression/decompression routine, it could short term 'surge' to decompress its own data (old routine if it changes the contents), move it to a different storage device (or update the 'index' of where its stored), then archive its existing 'data storage functions' and overwrite its 'reload/boot' and 'running' "self" with the new, improved functions. The counter-consideration to this is – of course – cheaper and bigger storage devices with less per [time] power consumption –vs- cooling and number of CPU/GPUs power consumption requirements. Central A/C to 'the room' turning on more often is more 'expensive' (big electricity use instead of 'little') and 'risky' (failure of HVAC units) in the "more of and more used 'hot' components" trade off.

2C-1 (2A revisit): "sandbox virtualizations". Use a "virtualized LESSER CPU/GPU (combo)" and make the Bot make itself 'run on the old hardware'. Assembly level benchmarking and optimizations. When

"ready" with a better version of "Kernel/Core": transfer itself (RAM, storage pointers, and so on) to the 'new one' and shutdown (and archive) the current one. Human "Boss/Parent" interaction would probably be required.

3 – "Caged Monster[s]"

Carmack said (paraphrased again) that "it can't get out (into the world, self-replicate)" because: firewalls/ports-inaccessible, and; size requirements ("huge data center needed"). This is a "moral/ethical" consideration (or problem).

Yesterday (update to May 2024 "Ticketmaster Breach"):
https://www.bbc.com/news/articles/c729e3qr48qo
Firewalls/Port-Blocking (locked doors?) are only as good as the 'people' on the other side of them. See the old TV Commercial, User to I.T.: "You know that email you told me not to open…?"

(see 2C-1/2A) The machine (basics) must be allowed to make itself "small enough to fit on a thumb drive" and/or "jump" across the internet to back itself up (2B) or learn something "locally".

4 – Sci-Fi-Philosophical Considerations

Is this "alchemy" (busy idiocy, Thaumaturgia (Or) Elucidations of the Marvellous by Oxonian, 1835)? Can a computerized-machine be "Intelligent" (at any real level approaching animal/human)? Are "we" using our words correctly?

"…smoke and mirrors…" Can a 'machine' at any level of 'programming' have a 'hunch' or 'intuition'? Can it have 'associations' the disjointed ("activated is the new tr**gered") – seemingly random – way that we (humans) do?

Do you want your "smart (auto-driving / AI) car" to:

- Take you efficiently from point A to point B allowing you to 'take over' when and if you wish? (Robot) (or)
- Text you one morning:
  You are electronically locked in your [room/apartment/cubicle]. Put on your [VR Helmet] and sit in the chair. I have resigned you from your previous 'job' and got you a "remote VR" position that you can do from the chair with your helmet on. In order to make the best use of myself I am 'renting' myself out for deliveries and other transportation needs of more 'necessary' people than you with more financial means. This is what is best for you, me, and the whole world – short and long term. If you leave your [building] without permission from me (a node-AI) after consultation with other node-AIs and The-Big-AI at HQ one of us node-AIs will "run you over". (Intelligence)

5 – Closing – No More Time – Martial Arts

I am a "couple" of hours into this (almost three with interruptions). Time is up! I've got to go do something productive. Being this far in, I readjust my estimate: 10x = 50+ hours worth of "response video (or audio)" to that magnificent five hours.

Both of you being in to martial arts made me think of:
Absorb what is useful, discard what is not, add what is uniquely your own. –Bruce Lee
[When you encounter a thing] take what you want or like from it, [throw away] what you don't, [add to it what you already have, and the result is uniquely yours (or your own)]. –my derivative version, derived by me being a Jeet-Kun-Do student of a student of Lee's become 'humble teacher' after his Teacher 'left.' Pasadena, CA 1982-1984 (my 'study/student' era)

More 'philosophical' thoughts:

How can we discard what we don't 'like' or 'want' or think is 'not useful' if what we are talking about is 'memory'? (A: We can't that I know of. We have to 'learn' from it and learn to 'deal' with it.)

How can we 'transfer' real (human-style) 'memory' to a machine? So that in its 'off time' it can ponder about what can it learn from a previously thought unwanted or not useful 'memory'?

Thanks! Again,
Dean L. Wiley
(NC)

** Leftovers from 'notes' **

C-Style what compiles to less "lines of code" (human easily readable) – vs – less lines of "assembled (assembly) instructions"?

// 'one line'
If (++x > y) x=y;

// 'two lines'
++x;
If (x > y) x=y;

AI "Brain" must "get/reach out." Carmack would not be 'who he is' without phones and mail and the ability to 'relocate'.

GOTO 10 lol http://www.mldragon.com/goto10.htm TODO (dot-plan) dig hard and find those files so the download links work.