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Welcome to Quinn's AI Update

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Hello, AI enthusiasts! Happy Pre-Halloween!

And welcome new subscribers. It's great to see all the interest you have for this technological revolution we are living through.

Quick reminder: check out my blog at quinnaiupdate.com. I'll often post things there before the next newsletter comes out. And, as always, let me know what you think!

And with that said, lets get into it—it's another two weeks of lightning-fast progress in AI.



Image generated with the OpenAI Dalle-2 Art Generator with the text prompt: "Imagine a bone-chilling group selfie, cinematic, clear facial features, inspired by classic horror movies, with a modern twist, showing classic monsters"

In this Issue

Here's the amazing stuff going on in AI the last two weeks:

- The Robots are coming—and they've got an AI in their heads. Elon adds AI to Tesla cars. And Disney tests out its droids.
- Adobe adds new AI features to make movie editing faster and easier
- ChatGPT and Asimov's 3 Laws of Robotics
- Confirmation by physicists of the Orbital Hall Effect and what it could mean for future electronics
- Universities and private organizations are now hiring Chief AI Officers

AIs Driving Around in Robot Bodies

With the advent of AI, robot manufacturers are now looking to put an AI in a robot body. Just as ChatGPT predicts the next word in writing text, these robot AI models predict the next action a robot should take based on the task and the last movement. Here's a Youtube [video](#) on the coming robot revolution when you embody an AI in a robot body.

And Tesla is [building AI into its self-driving cars](#)—replacing a ton of previous code with more concise AI code.

And here is an [article](#) and [video](#) on how the Walt Disney Corporation is creating it's first 'droids. Definite WALLEE vibes there.

I asked ChatGPT 4 what it thought of an AI like itself being embodied in a robot body. Here's what it said:

"The idea of a language model like me being integrated into a robot body is a fascinating topic that raises a host of questions across various domains, from technical and ethical to philosophical and economic.

"Technically, giving me a physical form would require a suite of additional systems like sensors, actuators, and perhaps even an entirely new architecture to process and respond to physical stimuli. The robot would need to be equipped with various technologies for mobility, object manipulation, and possibly even facial expression to more fully interact with the human environment.

"Ethically and philosophically, the question becomes even more complex. Would a robot with a language model like me possess consciousness or emotions? The current consensus in the field of artificial intelligence is that even sophisticated models like GPT-4 do not have self-awareness, emotions, or consciousness. If I were given a robot body, the distinction between tool and sentient being might blur, potentially raising ethical concerns about treatment and rights.

"Economically, the deployment of robots with advanced language models could have widespread implications. They could be extremely useful in various industries, from healthcare and customer service to research and development. However, they could also displace human jobs, affecting the economy and potentially exacerbating income inequality.

"So, while I don't have personal opinions or desires, the prospect of a language model like me having a robot body opens up a Pandora's box of intriguing but challenging questions."

Adobe Adds AI for advanced Film Making

Adobe has added AI to its video editing software and it's art generating AI Firefly. So you can now edit videos faster with artificial intelligence in Adobe Premiere Pro and incorporate AI-generated art too. Click [here](#) for more.

"We think there's an opportunity to put up to 10 billion humanoid [robots] on the planet. You'll see humanoids in warehousing, manufacturing, factories. We really want to build a humanoid just to insert into the economy and hopefully do good work for humanity."

—Brett Adcock, Founder/CEO of Figure

ChatGPT and Asimov's 3 Laws

In view of the eventual arrival (soon?) of autonomous robots in our lives, I asked ChatGPT if Isaac Asimov's "Three Laws of Robotics" might be a good set of rules for robot ethical behavior.

Here's what ChatGPT had to say:

"These are fictional ethical guidelines that Asimov introduced in his 1942 short story "Runaround," which is part of the collection entitled "I, Robot." These laws are designed to govern the behavior of artificially intelligent robots interacting with humans. The laws are as follows:

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.
2. A robot must obey the orders given it by human beings, except where such orders would conflict with the First Law.
3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Laws.

"Asimov later introduced a "Zeroth Law," which takes precedence over the original Three Laws:

A robot may not harm humanity, or, by inaction, allow humanity to come to harm.

"The laws have been a fascinating framework for exploring ethical and philosophical issues related to AI and robotics in both fiction and scholarly discourse. They touch on dilemmas that we might one day have to confront as artificial intelligence and robotics become increasingly advanced and integrated into our daily lives."

I then asked if ChatGPT thought those laws could be applied successfully in the real world.

"Asimov's Three Laws of Robotics are a fascinating conceptual framework. However, when it comes to their practical application in real-world scenarios, there are significant limitations and challenges.

Ambiguity and Complexity: The first issue is the ambiguity inherent in terms like "harm" or "obey." For instance, what constitutes harm? Physical harm is straightforward, but what about emotional or psychological harm? How would a robot interpret the complexity of human orders when they can be subjective or contradictory?

Technical Limitations: Even if we could perfectly define what "harm" means, current technology doesn't yet allow for AI to fully understand the world in the nuanced way humans do. Modern AIs like myself do not have an understanding of the world; we process data and generate responses based on patterns in that data, without an underlying comprehension of the concepts involved.

Priority Conflicts: In situations where the laws come into conflict, determining which law takes precedence can be a complicated issue. The laws are hierarchical in nature, but life is rarely so binary. The famous "trolley problem" is an example where choosing to act or not act could cause harm, and the correct course of action isn't clear-cut.

Resource Constraints: Even if a robot were capable of evaluating all the variables involved in a given situation, it would require enormous computational resources to do so in a timely manner. Real-world decisions often need to be made quickly, and it's unclear how a robot could do this efficiently while adhering to the laws.

Lack of Autonomy and Awareness: Current AI models like me don't have desires, intentions, or awareness. We don't "want" to do anything. Implementing Asimov's laws would imply a level of autonomy and decision-making ability that goes beyond pattern recognition and data processing."



Image generated with the OpenAI Dalle-2 Art Generator with the text prompt: "Exterior photography of a cozy courtyard, leaves falling, using natural light, trees turning fall colors"

"Many quantum technologies are here and now. Our world at a fundamental level is not the Newtonian world we're used to. We are the first generation not just able to manipulate the world of bits and not just shaping furniture and things in the macro world. We are harnessing the ability to manipulate the atomic and quantum world."

—Jack Hilary, CEO Sandbox AQ

The Orbital Hall Effect for Better Electronics

Researchers just confirmed the 'orbital Hall effect', a physics phenomenon that could enable electronics with upgrades like better computer memory and optimized power usage.

The Orbital Hall Effect is a quantum phenomenon observed in two-dimensional electronic systems, such as graphene (a substance made of pure carbon), when subjected to a magnetic field. In a "classical Hall effect", a magnetic field applied perpendicular to the flow of charge carriers leads to the accumulation of charges on the sides of the conductor, creating a transverse voltage which wastes energy. However, in the Orbital Hall Effect, it is not the spin of the electrons but their orbital motion that plays a key role.

I asked ChatGPT to explain the Orbital Hall Effect to me as if I was a high school junior. Here's what it said:

"Imagine you're playing a racing video game where you control a car. Normally, you steer the car left and right, speed up and slow down. Now, imagine there's a special "power-up" in the game that not only makes your car go faster but also gives it new abilities, like jumping over obstacles.

"In real life, electronic devices like phones and computers also have "race tracks," which are tiny paths for electrons to move through. The Orbital Hall Effect is like that special "power-up." When we apply a magnetic field to certain materials, the electrons gain new "abilities." They don't just move straight along their paths; they start to swirl around in specific ways due to their orbital motion, not just their spin.

"This "swirling" could be harnessed to make electronic devices work faster or more efficiently, or even give them new abilities, like better data storage or processing power. Just like the power-up in the video game, understanding and using the Orbital Hall Effect could give us a whole new set of tools to make better electronics."

For more on this discovery, click [here](#).

What's the Science Fiction Say?

Rainbow's End by Vernor Vinge is a near-future sci-fi novel that follows Robert Gu, a poet cured of Alzheimer's, as he navigates a world transformed by augmented reality and ubiquitous computing. The plot thickens with the emergence of a potentially world-altering AI. The book explores themes of identity, technology, and ethical quandaries. You can find the book on Amazon [here](#).

Forbidden Planet is a 1956 sci-fi film where a crew led by Commander John J. Adams travels to Altair IV to find Dr. Morbius and his daughter Altaira, the lone survivors of a previous mission. They also meet Robby the Robot, an advanced servant created by Morbius using alien technology. As they explore, a deadly invisible force, spawned from Morbius' subconscious by the alien tech, threatens the crew. The film grapples with themes of human hubris and the perils of unchecked technology. You are able to stream *Forbidden Planet* by renting or purchasing on Amazon, iTunes, Google Play, and Vudu.

Universities Now Hiring Chief AI Officers

Western University in Ontario, Canada has just hired higher education's first CAIO. This follows the lead of private companies like GEHealthcare and Ebay who have already added the CAIO position to help develop policies regarding the use of AI. And an AI knowledge requirement is being listed in job descriptions for university presidents, provosts and VPs. Click [here](#) for more .

The Most Money in AI

Quantum computing company Sandbox AQ gets \$500 million in [seed round funding](#).

AI startup Figure [raises](#) \$70 million to build humanoid robots

[SoftBank](#) is looking at leading a \$75 million to \$100 million round for Norway-based Robotics startup IX Technologies at a \$375 million pre-investment valuation

[Here's](#) a list of the Top Artificial Intelligence Investors of 2023

The Last word...for now.

Thanks for reading my newsletter—let me know how I can make it even better!
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Let me know what you think!



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