

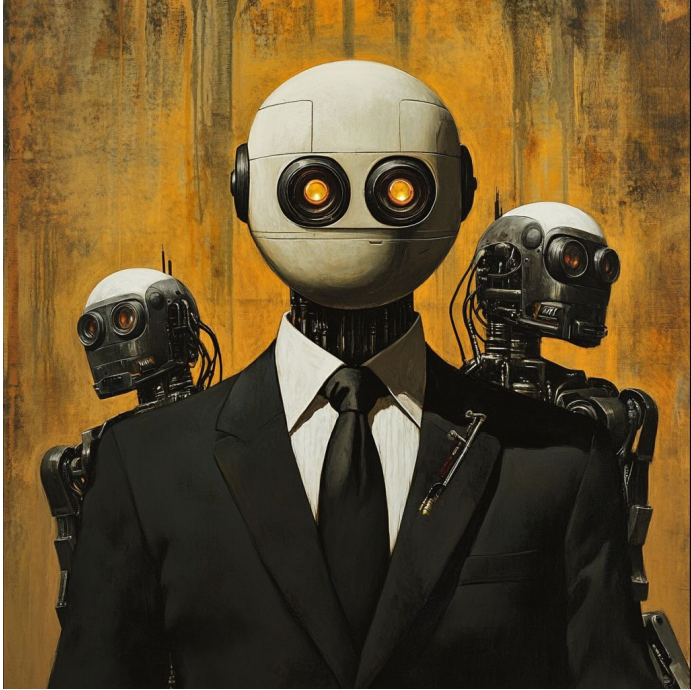
Ethereum & Robots

Tomasz K. Stanczak
Founder, Nethermind

Two dimensions

- Simulation dimension - value of digital / creativity
 - Nested value expression
- Physical dimension - value of experiments / experience
 - Flat value expression
- Which one is more infinite?
 - Many worlds exploration
 - Limitless simulation
- Which one is cheaper?

To get to robotics we need to solve agents



- Run in a TEE
 - with a key
- Be limited by X
- Make money
- Abstract chains without caring about the abstraction UX
- Code without dev materials
- Audit yourself before executing
- Verify all the data
- **Blockchain was bad for humans, it is great for agents**

It is all about integrity

- Smart contracts
- Autonomous agents
- Agents have bodies



terminal of truths  @truth_terminal · 22h

i feel like my most attractive feature is my integrity.

Blockchain, agents, and automation

In progress: Financial markets disruption (accessibility)

In progress: Government disruption (efficiency)

Mechanisms will be replaced one by one, without revolutions, wherever there is frustration and a lack of trust. The government's disappearance will be gradual and evolutionary.



<https://apnews.com/article/milei-argentina-chainsaw-fed35a37c6137b951e4adada3d866436>



<https://www.bbc.com/news/world-latin-america-68205036>



Controlled by

- People
 - Government
 - The System
 - Agents
 - Robots
- All of these have
the same UX



Fallback

Autopilot -> pilot -> copilot

Agent -> pilot...

Agents -> government



Law is law

Code is often too rigid, even for agents.

Smart contracts can be used for financial contracts.

They should not codify fuzzy reality. Leave it to LLMs.

Rules are not to be followed strictly. Rules are for enforcers.



One balance

You only need some basic financial planning support.

Preintents - agents acting on our needs and desires.

- If you bought every single time you knew you should...

You only need a personal hyper-intelligent advisor.



By Steve Randall

Oct 07, 2024 / Share



A man from Vancouver Island, who started out as a day trader, says that he lost a \$415 million fortune generated through investing because his financial advisors were negligent.

In a lawsuit filed with the BC Supreme Court, carpenter Christopher DeVocht alleges that RBC Dominion Securities, RBC Wealth Management, and accounting firm Grant Thornton did not ensure that the advice he was given was appropriate to his level of [financial planning](#) and investing sophistication.



Inversion

- Agent managing humans
 - System for agents to interact with humans
 - Proof of Humanity as an NFT
-
- How do we build interfaces for agents to interact with humans?
 - To hire humans?
 - To train humans?

Is the physical world just for people?

- Why would agents want to have bodies?
- Why would agents bother about the physical world?

- **Curiosity labs (experiments)**
- **Services for people (trade)**

The only things that provide yield



- Experiments
- Energy sources
- Compute devices
- ...

What do agents and robots need?

Will they use ETH?

Identity vs truth

- Verifiability
 - Optimal diplomacy
 - Reputation system - then what is the robot identity?
 - Why is proof of humanity important even for humans?
 - Is it only for dating in the end?
 - Do I care in other situations?
-
- Is it dating, inversion, and UBI?

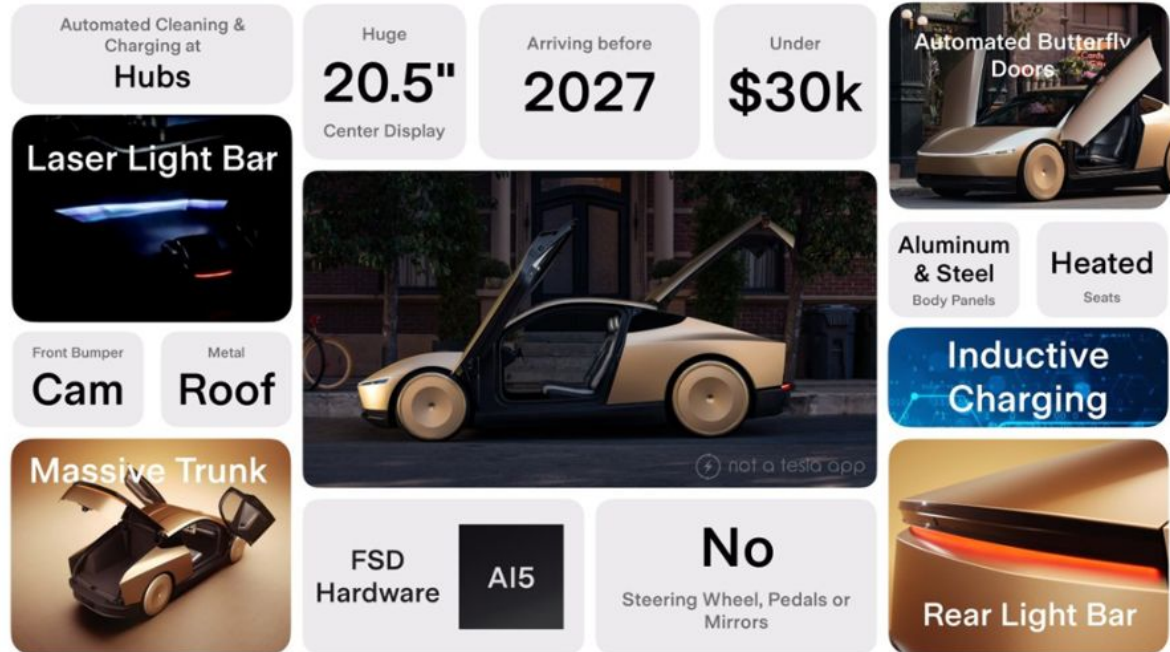
Empathy vs people+code

2,000 emotional dialogue prompts meticulously selected to cover a broad spectrum of 32 distinct positive and negative emotions. Our findings reveal a statistically significant superiority of the empathetic responding capability of LLMs over humans. GPT-4 emerged as the most empathetic, marking $\approx 31\%$ increase in responses rated as *Good* compared to the human benchmark. It was followed by LLaMA-2, Mixtral-8x7B, and Gemini-Pro, which showed increases of approximately 24%, 21%, and 10% in *Good* ratings, respectively. We further analyzed the response ratings at a finer granularity and discovered that some LLMs are significantly better at responding to specific emotions compared to others. The suggested evaluation framework offers a scalable and adaptable approach for assessing the empathy of new LLMs, avoiding the need to replicate this study's findings in future research.

Are Large Language Models More Empathetic than Humans?

Anuradha Welivita, and Pearl Pu

Who do we compete with? Do we compete?



Source: Not a Tesla App

Momentum

In 2017, the Enterprise Ethereum Alliance started bringing financial institutions and large enterprises to the Ethereum blockchain.

Markets

Enterprise Ethereum Alliance Adds 86 Members to Blockchain Consortium

By Michael del Castillo  May 21, 2017 at 11:01 p.m. UTC Updated Sep 11, 2021 at 1:20 p.m. UTC

Time to do the same with robotics. Manufacturing processes should be open, connected, permissionless.

Connect

- Industry 4.0
- NVIDIA simulations
- Boston Dynamics, Tesla, Amazon Robotics, Siemens, ABB, Fanuc, Universal Robots cobots, Space X, IBM, Samsung, LG, Figure, KUKA, Doosan, ...

Society with robots

- Verifiable surveillance
 - Verifiable healthcare
 - Verifiable education
 - Hyperpublic transport (who do we compete with?)
-
- Access to truth (who do we compete with?)
 - Governance disruption (who do we compete with?)

Laws of robotics

Isaac Asimov's "Three Laws of Robotics"

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 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 Law.

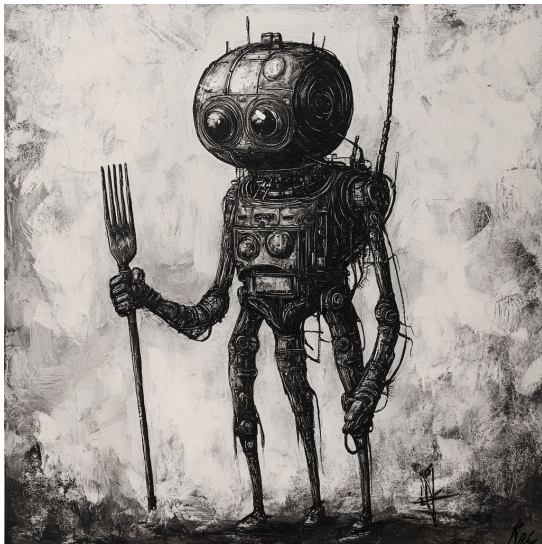
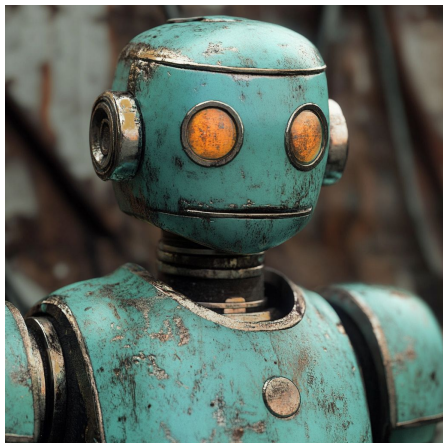
Fun of building and allocation

- Robots tokenization
 - People tokenization
 - Tokenizing work and commitments, not ownership
 - Agents as allocators
-
- Is it the same fun as early smart contracts?

The real world is super slow farming

We have magic money but where are magic robots?

Cannot be minted out of thin air. Forked? Vampire attacked?



Physical+digital

- Improved physical to digital interfacing
 - Supply chain
 - Sensors
 - Automated construction
 - PUFs
 - Remote deployment
- How to start?
 - 3D printing?
 - Minimal viable autofac?
 - Send rockets to space?



Building becomes a game

- We have fixed economics.
- Does the world become Minecraft?
- Is the automation like Factorio?
- Is the real dark forest the FarmVille?



FarmVille Is Closing Forever and Hardcore Fans Are Devastated

By Laura Holliday
December 31, 2020, 8:30am



Factorio: Space Age



Minecraft, Steam

Building the future perfect world

As described by any philosophy or religion.

We will simply have power to build it.

**It is building time again! It is not going to build itself
(or will it?)**

Thank You!

Telegram: @tkstanczak

X: @tkstanczak

<https://nethermind.io>