

Tech Talk 13
with John Patrick
Thursday, March 28, 2024



- Sign-up sheet
- johnpatrick.coms
- AI with opening videos
- The Rise of Bitcoin
- Update: Medical IDs, security, and privacy, and other topics
- Things I am working on.
- Q&A

❖ *A Dynamic Humanoid Robot*



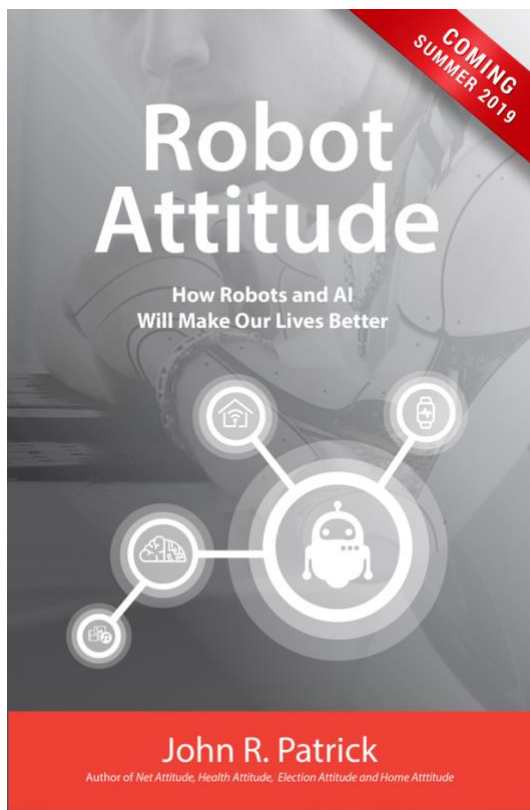
Add some more intelligence

➤ Elon Musk and Mary Barra



On March 16, 2023, along with 1,000+ others, I signed a letter written by Elon Musk, CEO of SpaceX, Tesla & X, and Steve Wozniak, Co-founder, Apple. The letter, published by futureoflife.org, is a plea to 'Pause Giant AI Experiments'.

- December 16, 1994
- John Gage
- "Get Connected"
- *Robot Attitude: How Robots and Artificial Intelligence Will Make Our Lives Better (2019)*



➤ Why exponential now?

- ✓ Awesome computer power (Nvidia)
- ✓ Reliable and fast Internet
- ✓ Near infinite cloud storage



- ✓
- ✓ Super smart computer scientists
- ✓ Breakthroughs in algorithms
- ✓ Venture capital: >8,000 startups
- ✓ Market potential > \$1.5 trillion

➤ Many components and elements

- ❖ *Large Language Models*
- ❖ *Machine Learning*
- ❖ *Deep Learning*
- ❖ *Neural Networks*
- ❖ *Natural Language Processing*
- ❖ *Computer Vision*
- ❖ *Robotics / Self-driving cars*
- ❖ *Robotic Process Automation*
- ❖ *Virtual assistants – Alexa, Siri, chatbots*

➤ Pluses and Minuses of AI

❖ *There are plenty of both.*

❖ *Pluses*

- ✓ Robots with AI can do jobs which are difficult, dangerous, or boring.
- ✓ Improved healthcare outcomes
- ✓ Collaboration - enabling us to learn.
- ✓ Boosts productivity and efficiency

➤ *Productivity*

I asked Gemini the following question:

I am sitting on the eighth floor of our condo building on the Atlantic Ocean. What is the distance from here to the horizon?

Almost instantly, Gemini responded with the following:

To estimate the distance to the horizon from your eighth-floor condo overlooking the Atlantic Ocean, we can use the formula for the distance to the horizon based on height above sea level.

Here's what we can do:

1. Estimate your height: You're on the eighth floor. Assuming typical floor heights of around 10 feet, being on the eighth floor would put you at about 80 feet above sea level.
2. Use the formula: There are online calculators for this purpose, but you can also use the following formula:

Distance to horizon (miles) = $\sqrt{\text{observer height (feet)} * 0.000052}$

3. Plug in your estimated height: Assuming 80 feet, here's the calculation:

* In miles: Distance = $\sqrt{80 * 0.000052} \approx 2.9$ miles

Therefore, the distance to the horizon from your vantage point is estimated to be around 2.9 miles.

Keep in mind: This is a rough estimate. Actual visibility can be affected by factors like air pressure, temperature, and curvature of the Earth (which isn't a perfect sphere).

❖ *Minuses*

- ✓ Mistakes and bias
- ✓ Can spread misinformation/deep fakes. Elections. General politics.
- ✓ Can eliminate millions of jobs.
- ✓ Can potentially threaten humanity

❖ *Facial Recognition*

- ✓ January 6
- ✓ 17 cities have banned facial recognition.
 - San Francisco
 - Boston and Springfield, MA
 - Portland, OR
 - Portland, ME
 - Et al
- ✓ AirBnB (7.7 million active listings worldwide)

- It's all about data and algorithms.
- Dogs and Cats
- Large Language Models
- Generative AI
 - ❖ *Conversation is key.*
- Impact
 - ❖ *Every organization, every person, every process*

- The AI Revolution in Medicine
 - ❖ ***Peter Lee et al***
- EHR/WES models
- Medical errors, medical research, diagnoses, physician notes, paperwork, and much more
- Stethoscopes
 - ✓ Proforma auscultation
 - ✓ Pneumonia, asthma, COPD, bronchitis, pleural effusion, cardiac irregularities
- X-Rays, CT/PET scans, MRIs
- Opportunities exceed exposures.
 - ❖ ***Chance for healthcare to catch up.***
 - ❖ ***Go for the low hanging fruit.***

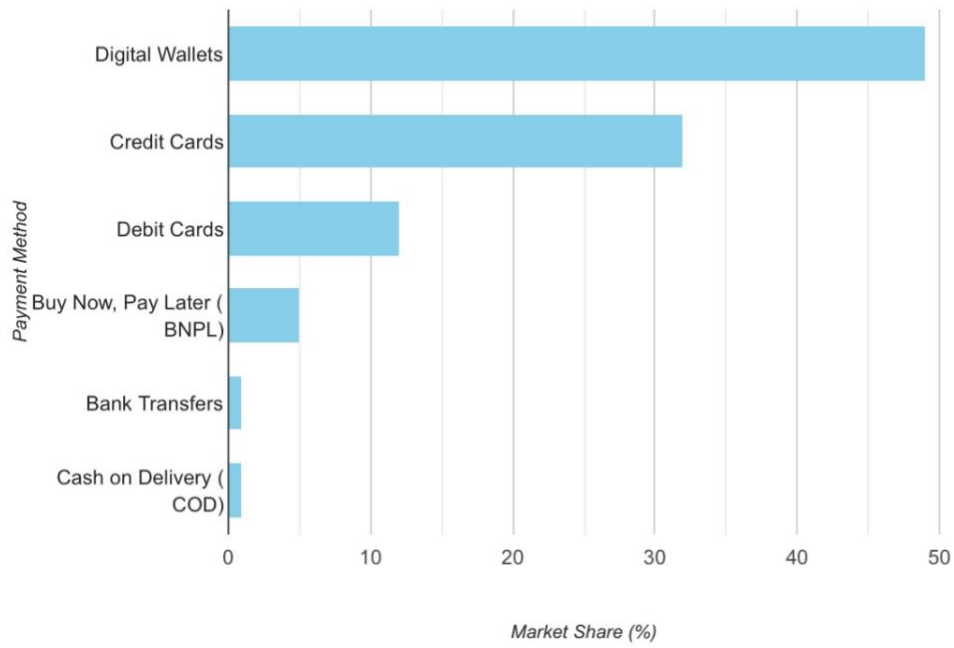
- The need for regulation
- Senate hearings (May, July, September) 2023
- Genie is out of the bottle.
- More genies will be coming out of more bottles.
- Europe and China far ahead

➤ Cryptocurrency and blockchain

❖ *Crypto currencies and tokens*

- ✓ Nothing physical
- ✓ Blockchain (No central authority)
- ✓ Secure
- ✓ Immutable
- ✓ How it works: Satoshi Nakamoto's original Bitcoin [paper](#)
- ✓ Fixed supply: 21 million Bitcoin
- ✓ Halving every 210,000 blocks (approx. every four years)
- ✓ 28,000+ cryptocurrencies and tokens in circulation
- ✓ 600+ exchanges
- ✓ Digital Wallets (one billion?)


E-Commerce Payment Method Market Share (2022)



❖ ***Is Bitcoin a currency or a security?***

- ✓ 15,000+ merchants worldwide accept crypto for payment.
- ✓ Starting to look like a safe haven?
- ✓ BlackRock et al think so.

Crypto Summary (billions) as of		3/28/2024	3/23/2023	
		Price	Price	Gain
Bitcoin		\$70,642	\$27,942	153%
Ethereum		\$3,576	\$1,803	98%
Number of Cryptocurrencies		28,724	23,022	
Market cap of BTC		\$1.39	trillion	
Market cap of ETH		\$0.43	trillion	
Market cap of all crypto		\$2.66	trillion	
Marketshare:				
Bitcoin (BTC)		52.3%	46.0%	
Ethereum (ETH)		16.2%	18.8%	
The Rest		31.5%	35.2%	



- ❖ *What is driving up the price?*
 - ✓ **BlackRock's bitcoin ETF** hit \$10 billion in assets under management faster than any other ETF in history.
 - ✓ **Halving: April**
 - ✓ **Limited supply**

➤ Stablecoins

❖ *Pegged to \$ or something*

- ✓ Tether (USDT)
- ✓ USD Coin (USDC) Circle
- ✓ Binance USD (BUSD)
- ✓ Dai (DAI)
- ✓ TrueUSD (TUSD)
- ✓ Frax (FRAX)
- ✓ Pax Dollar (USDP)
- ✓ Liquity USD (LUSD)
- ✓ Stasis Euro (EURS)
- ✓ Reserve Rights (RSR)

❖ *For consumer*

- ✓ Average cost to wire funds <> \$45 + delays
- ✓ With stablecoin < \$1 + instant
- ✓ Small fee on aggregate transfers

➤ Delaware vs. Wyoming

➤ Blockchain technology

- ❖ *Open source (Steve Balmer)*
- ❖ *Distributed database*
- ❖ *Consensus based.*
- ❖ *Crypto currencies*
- ❖ *Digital artwork: NFTs*
- ❖ *Deeds*
- ❖ *Car, boat, airplane titles*
- ❖ *Birth, death, marriage certificates.*
- ❖ *Votes*
- ❖ *DAOs*
- ❖ *DeFi*
- ❖ *FinTech*
- ❖ *Web3*
- ❖ *IBM and other IT vendors all over blockchain*
 - ✓ Supply chain

➤ NFTs

- ❖ *Non-fungible tokens*
- ❖ *Many uses but current biggie is art*
- ❖ *Millions of creative artists do not have access to major auctions, brokers, insiders*

Now they have something better

- ✓ [Blockchain](#)
- ✓ [NFTs](#)

❖ *A new vocabulary*

- ✓ Minting
- ✓ Drops
- ✓ Editions
- ✓ Schedules
- ✓ Auctions
- ✓ OpenSea
- ✓ Blur
- ✓ Nifty Gateway

Tax implications

Fraud and insider trading
implications

- **Crypto investment aspect**
 - ❖ ***High volatility***
 - ❖ ***High risk***
 - ❖ ***Uncertainty of regulation***
- **600+ crypto exchanges**
 - ❖ ***Binance***
 - ❖ ***Coinbase***
 - ❖ ***Crypto.com***
 - ❖ ***Gemini***
 - ❖ ***Kraken***
- **10 Spot Bitcoin ETFs**
- **FTX (Sam Bankman-Fried)**
 - ❖ ***A long road to hoe***
 - ❖ ***Movies and books ahead***
 - ❖ ***Lawyers are the winners***

➤ **Crypto regulation**

❖ ***Congress ????***

➤ **Bitcoin challenges**

❖ ***Transaction capacity/speed***

❖ ***Block size limitation***

❖ ***Forking***

❖ ***Mining fees***

✓ Lightning network

❖ ***Environmental concerns***

❖ ***Taxes***

❖ ***Needs digital wallet***

❖ ***Merchants/consumers chicken/egg***

➤ Mobile voting



➤ Voatz in Mexico

➤ Metaverse

- ❖ ***Not new but dramatic advances taking place.***
- ❖ ***Real vs. Virtual***
- ❖ ***VR/AR/MR or spatial computing***
- ❖ ***Meta (formerly Facebook)***
- ❖ ***Roblox (\$27 billion market cap)***
- ❖ ***Apple: Goggles, gloves, devices?***
 - ✓ Vision Pro for spatial computing
- ❖ ***Not just games***
 - ✓ Office, Kitchen, Entertainment, Engineering, Education, Healthcare, Mental Health, and more
- ❖ ***Who will be the winner?***

➤ Healthcare

❖ ***#1 problem is cost***

❖ ***Quality issue***

✓ #3 cause of death = hospitals

✓ 250,000+ die of medical errors

❖ ***Inefficiency***

✓ PBMs

✓ Supplies and medical devices

✓ Paper and faxes

❖ ***Big Pharma***

✓ Won the war for now

✓ Pricing to value of a life

✓ Spending \$billions on TV

➤ Medical ID

❖ ***Update Medical ID info using the Health app***

➤ Apple Health

➤ Google Fit

➤ Samsung Health

- Passwords: root cause of many problems
- Cybercrime is rampant and growing
 - ❖ *Fraud*
 - ❖ *Phishing*
 - ❖ *Spear phishing*
 - ❖ *Spoofing/Identity theft*
 - ❖ *DDOS*
 - ❖ *Text messages, not just email*
- Cautions
 - ❖ *Don't trust emails or texts*
 - ❖ *Be suspicious*
 - ❖ *Don't open any attachment unless you know the sender and specifically expected it*
 - ❖ *Hover over links*
 - ❖ *Take passwords seriously!*

➤ Password Managers

❖ *1Password*

❖ *DashLane*

❖ *Keeper*

❖ *Apple Keychain*

❖ *Google Password Manager*

➤ Essentials

❖ ***2FA***

❖ ***Biometrics***

✓ Touch ID

✓ Face ID

✓ Worldcoin Tool for Humanity

Iris scans

❖ ***Go passwordless with passkeys***

➤ Privacy regulation

- ❖ ***Sorely needed.***
- ❖ ***Industry begging for it.***
- ❖ ***GDPR***
 - ✓ General Data Protection Regulation
 - ✓ Passed by European Parliament in May 2018
- ❖ ***CCPA***
 - ✓ California Consumer Privacy Act - June 2018
- ❖ ***U.S. Congress***
 - ✓ ?????

➤ SpaceX

- ❖ *Falcon 9*
- ❖ *Starlink*
- ❖ *Neuralink*



➤ Things I am working on

❖ ***"It's All About Attitude"***

❖ ***Digital Patient Experience at Nuvance Health***

✓ [mHealth Journal article](#)

❖ ***Startups***

✓ [StartEngine](#)

✓ [FundersClub](#)

✓ [Wefunder](#)

✓ [SeedInvest](#)

❖ ***Lego Projects***

❖ ***Sign up for Saturday morning e-brief at johnpatrick.com***

❖ ***Copy of presentation***

✓ [https:// johnpatrick.com/techtalk13.pdf](https://johnpatrick.com/techtalk13.pdf)

Q&A

