



Open Discussion #4

PORTO
July 2024

IARIA Congress 2024 & DigiTech 2024

Theme: (de)generative AI - There is a Bad Moon on the Rise!

COORDINATORS

Prof. Dr. Petre Dini, *IARIA, USA/EU*

Dr. Ejike Nwokoro, *MD, MPH, Head of Patient Insights & Data Strategy, HealthNet, UK*

Dr. Roger Tilley, *Sandia National Laboratories, USA*

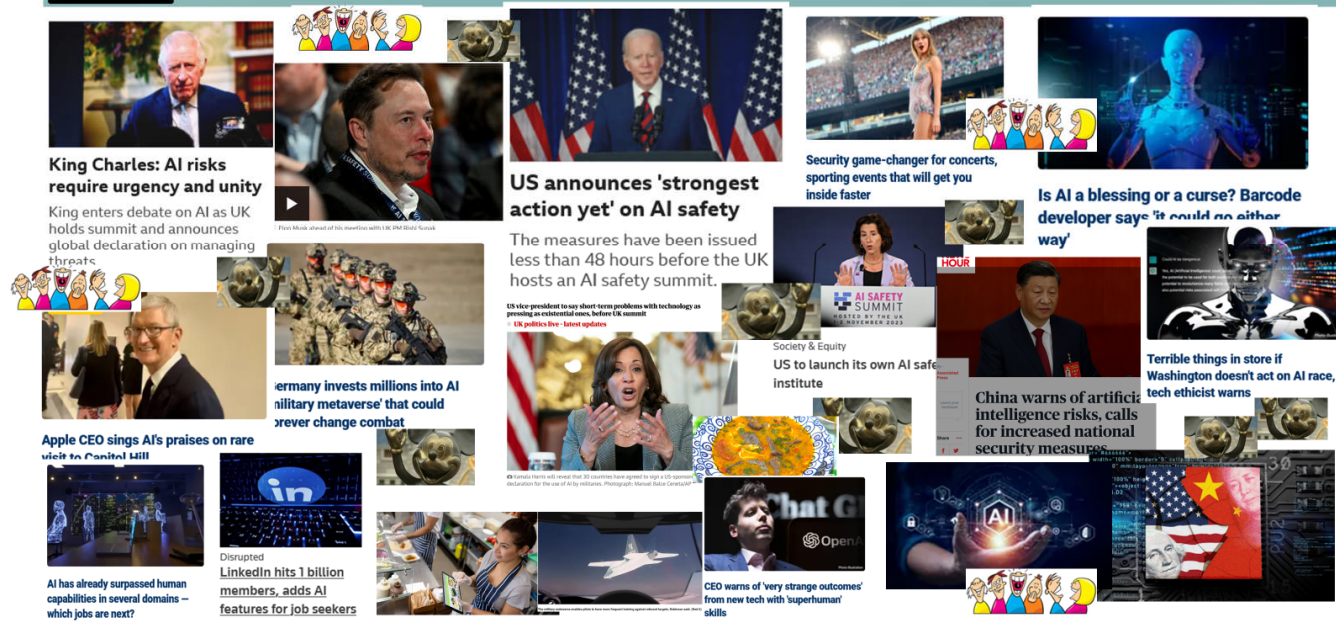


OD#4 / Petre

PORTO
July 2024



SUDDENLY - A PLANETARY STORM



It only takes one selfie for new tech to decipher your political affiliation



Petre DINI
IARIA

Any technology is good

Its use can be useful or harmful



Cyberattack wipes out crucial DOT highway signs ahead of severe weather

New Spectra: gen-AI, LLMs, ML, Datasets, Enforced Recursive Learning, etc.

New Technologies: IoT, Drones, Data-Centers, Cloud, DPU, IPU, 5G/6G, etc.

Useful: gen-AI, very good at the secretary level (quicker, overarching): 'great summarization'; it depends on input data (coverage, real-time, unbalanced, etc.)

Hurting AI itself - too many 'experts' regretting **fathering AI** (ignorant, arrogant, charlatans)

- too many scarecrows, fearmongers (**humanity will disappear**, self-deciding robots, killer-robots, etc.); **investments target**

- **marketing pressure:** hallucinations, unintended consequences, over/under-fitting (too focused, too vague)



OD#4 / Petre

PORTO
July 2024

Let us set the record straight (as July 4th, 2024)!

Inventions (~1% on purpose, 99% unintended discovery);

On former, I know a very few, indeed!

Basis is: 'understanding' and 'inserting' a new acquired information in the right place of the existing knowledge.

Mostly, **incidental action**, followed by experience, failures, experiments again, improvements, acceptance, improvements, etc.

Let us think at:

- Fire
- Matches
- Tires (cars, bicycles, ...)
- C Vitamin
- Stickers
- Wheels
- Bicycles

Music (i) (mind expression, even silent)

Music instruments (ii) (100% invention) for sharing 'interior thinking'

<https://www.the-sun.com/tech/9508495/chatgpt-ceo-ai-superhuman-persuasion-skills-strange-outcomes/>

<https://www.foxnews.com/us/chatgpt-chief-warns-superhuman-skills-ai-develop>

AI Scarecrow



Oracle of Delphi

Delphi was an ancient religious sanctuary dedicated to the Greek god Apollo. Developed in the 8th century B.C., the sanctuary was home to the Oracle of Delphi and the priestess Pythia, who was famed throughout the ancient world for divining the future and was consulted before all major undertakings.



CEO warns of 'very strange outcomes' from new tech with 'superhuman' skills

Cutting through the Hype

(towards AI - so-called Literacy!)

- Fathering AI
- AI Experts
- AI Analysis
- AI Ethicists
- AI-based producers
- AI Beneficiary



- AI culture, AI Literacy
- AI skeptics
- AI charlatans

- AI Governments summit
- AI (-self) governance
- AI governance
- Corporate self-guaranty entitlement
- Corporate **self-explainability duty**
(see: [Oracle of Delphi](#))
- Corporate self-safety checking

True AI Enthusiasts and Supporters

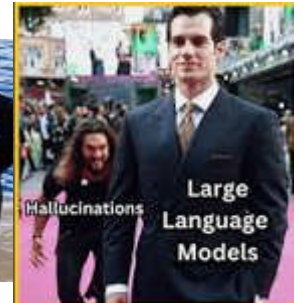
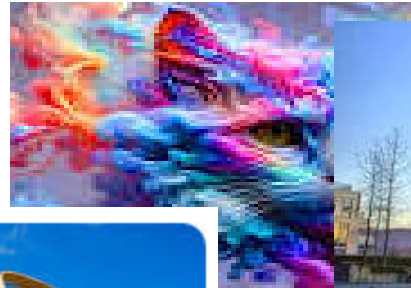
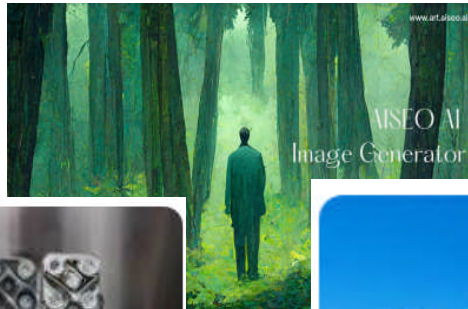
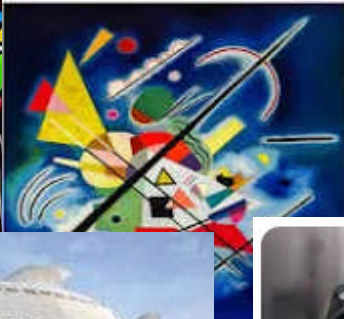
Professors trying to get various flavors of scientific help in their teaching endeavor: CENTRIC, ICSEA, CYBER, MMEDIA, etc.)



OD#4 / Petre

PORTO
July 2024

Hallucinations and unintended consequences do not justify scarecrow-like behavior of business drivers



NASA Turns to AI to Design...

Our Top Five Strangest Build...

2+2 = 5, all lines are straight, 2 = 10, log(-3) = x
Horses ride a bicycle over the shining cloud of dust!!
Aliens will invest in The House of the rising Sun!
Alice's Adventures in the Wonderland

John published a paper on Mars in the year 2500 [24].
There are 5 Planets and one Galaxy only.
Army of X plans invading Y country at midnight, 2024, July 4th.

Recommended references on a geology paper.

[x] Pierre, Title 1

[z] Jacobs, Title 2

[y] Stan, Title 3

Note: [x] doesn't exist

[z] has another title

[y] is a carpenter instructions book

- LLMs-based:**
- very good summarization of information they are fed with, even if only less than 1% validated as true
 - very good mixed (4-5-6 ...) languages, correct punctuation, correct grammar, spelling correction on context-based intuition
 - helpful at the informative level, like white papers, very quickly obtained and quite comprehensive
 - user familiarity and experience with a given domain are assumed; e.g., selection of an oscilloscope for 5G spectrum, financial aspects,...





OD#4 / Petre

PORTO
July 2024

<https://www.foxnews.com/tech/fcc-slaps-att-verizon-t-mobile-with-mega-fines-for-data-deceit>



FCC slaps mobile carriers with mega fines for data deceit



Facebook's massive data breach



FCC slaps AT&T, Verizon and T-Mobile with mega fines for data deceit



AT&T: With a fine exceeding \$57 million, AT&T faces significant repercussions.

Verizon: The carrier was fined \$46 million, signaling Verizon's alleged involvement in the data breach.

FCC imposes \$200 million fine on mobile carriers for location data breach

Contact your carrier: If you have concerns about how your data is being handled, contact your carrier directly to express your concerns and request more information about their data protection measures.

Stay proactive: Regularly update your device's security settings and stay proactive about protecting your personal information.



OD#4 / Petre

PORTO
July 2024



Apple in breach of law on App Store, says EU

It is the first time a company has been found to be in breach of the Digital Markets Act (DMA).

European Union regulators have accused Apple of being in breach of new laws designed to rein in big tech companies.

The European Commission, which regulates competition in the EU, said Apple's App Store squeezes out rival marketplaces, marking the first time it has found a company in breach of the Digital Markets Act (DMA).

The firm faces a potential fine of up to 10% of its global revenue if it fails to comply with the rules.

The European Commission says that developers should be able to freely tell customers when there are cheaper app stores available beyond the one run by Apple.

The firm charges developers an average of 30% commission on its App Store.

Previously, it was told to allow alternatives in the EU in March.

<https://www.bbc.com/news/articles/c5111qxl2nro>

This focuses on three main areas:

A fee of €0.50 (£0.42) which Apple charges developers for every app downloaded outside of Apple's App Store

The number of steps which Apple puts in place for users who want to download apps from alternative stores

Whether Apple's eligibility criteria for alternative app store developers breaches the DMA



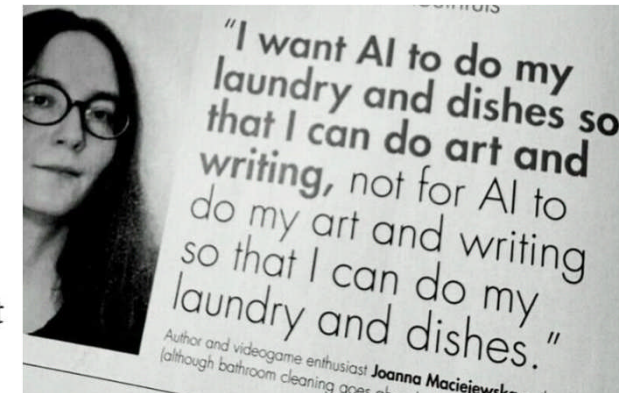
OD#4 / Ejike

PORTO
July 2024

Brace yourselves! AI has come to stay or has it?

■ Gen AI applications have permeated [almost] all aspects of society, not least healthcare

- GenAI in Biomedicine
- Large language models for interpreting treatment guidelines
- Health Technology Assessment for Medicine reimbursement
- Drug Discovery and Development
- Radiology and Imaging Analysis
- Prognostic Validation in Cancer management
- Symptom Assessment and Secondary care gate-keeping
- Remote Patient Monitoring



Ejike Nwokoro
HealthNet UK / UAE

Business
China unveils world's first AI hospital with 14 AI doctors

'Agent Hospital' can treat up to 3000 patients a day, compared to a normal hospital

By Web Desk | May 31, 2024



Masterclass
How to bring AI and digital health technologies to the NHS

Monday 23 October 2023
11am to 2pm BST
Virtual event

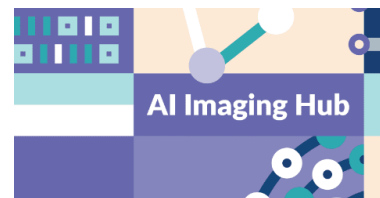
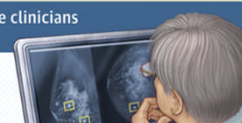
NICE

Cancer Care in the Era of Artificial Intelligence (AI)

AI consists of intelligent computer programs that can learn from large quantities of data and assist health care teams with cancer diagnosis and treatment decisions.

Ways AI can help health care clinicians improve cancer care

Analyzing medical imaging (CT or PET scans) to help identify tumors or other cancer-related abnormalities



NIHR Biomedical Research Centre at The Royal Marsden and the ICR



ARTERA AI SECURES \$20M FOR CANCER THERAPY AI



Adapting to Tomorrow's Care: The Imperative for Nephrologists to Embrace AI in Kidney Healthcare – A Must-attend Plenary Session at WCN'24

News, WCN



OD#4 / Ejike

PORTO
July 2024

But is Gen AI all it's made out to be?

- AI applications have permeated [almost] all aspects of society, not least healthcare
 - Data quality: is there enough testing and validation?
 - Data privacy: who has access to what and who owns what?
 - Compatibility with health systems
 - Trust and AI literacy: bottlenecks to clinical adoption
 - Mitigate AI gaslighting
 - Tackle AI Hallucinations



Elon Musk X @elonmusk · 17m
It's patently absurd that Apple isn't smart enough to make their own AI, yet is somehow capable of ensuring that OpenAI will protect your security & privacy!

Apple has no clue what's actually going on once they hand your data over to OpenAI. They're selling you down the river.

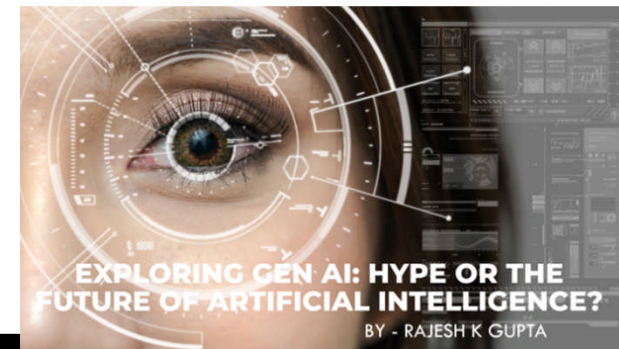
3.7K 5.6K 30K 1.2M

Elon Musk X @elonmusk · 30m
Replying to @elonmusk
And visitors will have to check their Apple devices at the door, where they will be stored in a Faraday cage

932 1.1K 12K 733K

Elon Musk X @elonmusk · 32m
If Apple integrates OpenAI at the OS level, then Apple devices will be banned at my companies. That is an unacceptable security violation.

5.7K 11K 54K 3.7M



Exploring Gen AI: Hype or the Future of Artificial Intelligence?

Rajesh K Gupta
Predictive Analytics | Statistics | Data Science | Machine Learning | Deep Learning | Computer Vision| NLP| Gen AI | BI |...
April 12, 2024



Ejike Nwokoro
HealthNet UK / UAE

The Limitations of Generative AI, According to Generative AI
AI and ML: Sergio Britons

GenAI is not a fad but an incredibly powerful tool, says Bloomberg LP's Shawn Edwards

The top executive says Gen AI will allow us to solve problems we couldn't before and create new types of systems.

How will AI destroy us?

Excuse Me, Is There AI in That?

Businesses and creators see a new opportunity in the anti-AI movement.

By Brian Merchant

Jason Polak
Friday July 21, 2023



OD#4 / Roger

Porto
May 2024



Roger Tilley
Sandia National
Laboratories

▪ What is Generative AI (my view)?

- **A method to Perform tasks** based on statistical likelihoods to predict an output rather than search and combine answers from LLM (large language model).
- Uses Natural Language Processing & Machine Learning to create content that appears to have come from a human
- Uses LLMs created by machine learning algorithms to recognize patterns and structures in language

▪ Reasons to Use AI

- Automating **Routine** Tasks
- Improving Audience engagement – using **intelligent assistants** for answering questions, facilitating transactions
- **Spark Creative Ideas** as a brainstorming partner

▪ Risks

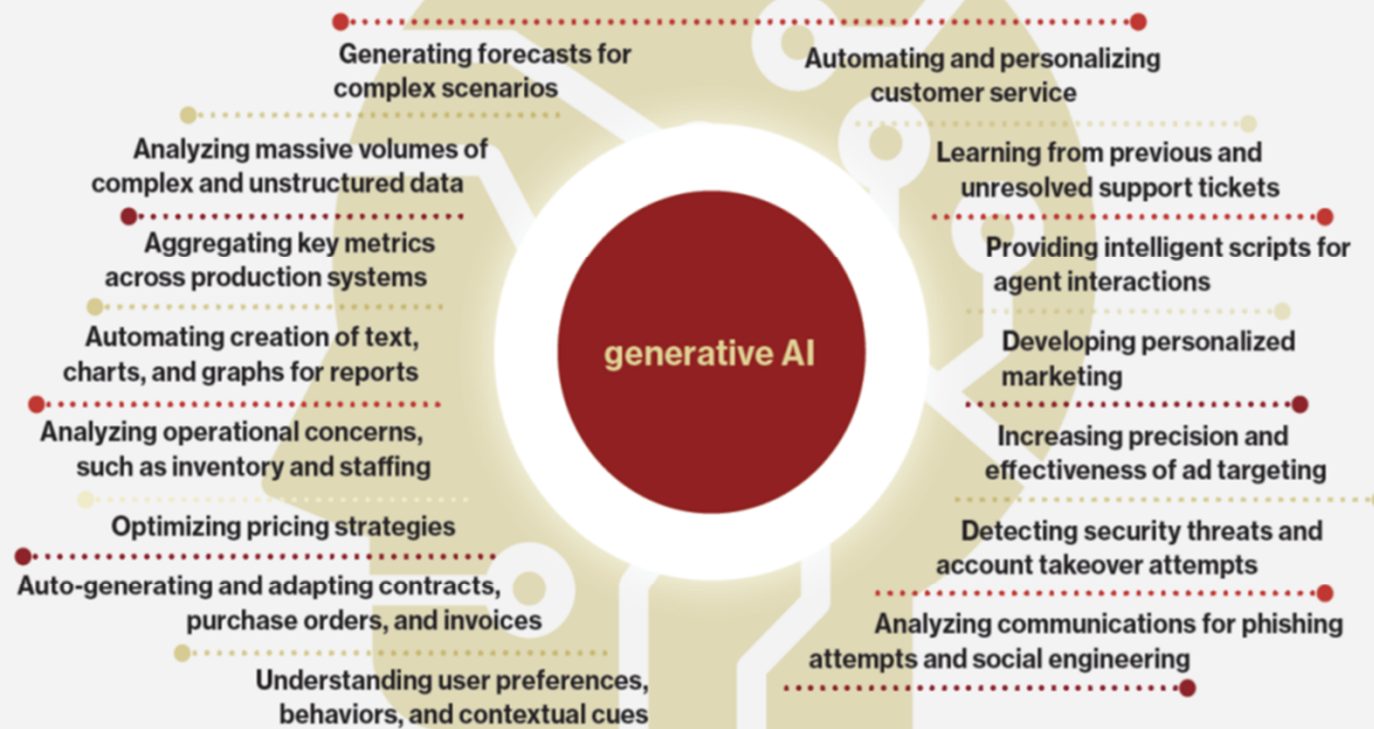
- **Data security leaks**... ex. - Intellectual Property, Personal data, Passwords, Company proprietary information (uploaded to improve AI search issues with LLM – Large Language Models)
- **Inappropriate** automated responses
- Ownership of generated images (ex. - **deep fakes**)
- Copyright infringement – **Unauthorized** use of material
- Replacing human judgement and decision making
- Algorithmic **bias**
- Misinformation **amplification**



OD#4 / Roger

Porto
May 2024

These are just a few of the business functions compellingly addressed by generative AI.



Source: Compiled by MIT Technology Review Insights, based on data from "Retail in the Age of Generative AI,"⁵ "The Great Unlock: Large Language Models in Manufacturing,"⁶ "Generative AI Is Everything Everywhere, All at Once,"⁷ and "Large Language Models in Media & Entertainment,"⁸ Databricks, April–June 2023.



Roger Tilley
Sandia National
Laboratories



OD#4 / Roger

Porto
May 2024

- **Controls are needed to police the AI database**

- Regular monitoring & updates

- Security features

- Encrypt the database
 - Regular security audits
 - Vulnerability assessments
 - Do not share confidential or sensitive information with AI platforms

- **References**

- <https://priceweber.com/2024/06/07/ai-in-public-relations-and-social-media/>
 - <https://www.bornsocial.co/post/impact-of-ai-on-social-media#:~:text=What%20are%20the%20benefits%20and,algorithmic%20bias%2C%20and%20misinformation%20amplification.>
 - MIT Technology Review – The Great Acceleration: CIO Perspectives on AI Generation
 - Generative AI Explained – The Complete Guide for Enterprise Business Leaders



Roger Tilley
Sandia National
Laboratories



Inquiries under Discussions

PORTO
July 2024

Items under scrutiny

- a. Ethics on model training for healthcare decisions
- b. Cost associated for delivery AI-based services
- c. LLMs training (issues with input data, Q&A Datasets, RLHF –feedback-, etc.)
- d. Dangerous applications and wrongdoers vs. Useful and impressive services
- e. AI literacy and ... unintended human ignorance
- f. Dangers of / Scale of /Detection of AI Hallucination
- g. Regulatory oversight for Gen AI application
- h. Gen AI: Will it reduce or exacerbate health inequalities?
- i. Could widespread adoption of Gen AI put human creativity in danger of erosion?



STAGE IS YOURS

PORTO
July 2024

**(de)generative AI - There is a Bad Moon on
the Rise!**

Really?