



Panel #3

VENICE
FALL 2024

IARIA Congress 2024 & DigiTech 2024

AI-driven and Human-centric – A (conflicting) Cohabitation Dilemma

Moderator:

Prof. Dr. Stephan Böhm, RheinMain University of Applied Sciences, Germany

Panelists:

Prof. Dr. Christelle Scharff, Pace University, USA
Dr. Antoni Martínez-Ballesté, Universitat Rovira i Virgili, Spain
Prof. Dr. Jirawat Damrianant, Thammasat University, Thailand
Prof. Dr. Petre Dini, IARIA, USA/EU



Panel #3

VENICE
FALL 2024

- 1 Prof. Dr. Stephan Böhm, RheinMain University, Germany
- 2 Prof. Dr. Christelle Scharff, Pace University, USA
- 3 Dr. Antoni Martínez-Ballesté, Universitat Rovira i Virgili, Spain
- 4 Prof. Dr. Jirawat Damrianant, Thammasat University, Thailand
- 5 Prof. Dr. Petre Dini, IARIA, USA/EU



Panelist Position

VENICE
FALL 2024

- **Need for Balancing AI Automation and Human Intuition in Decision-Making**
 - AI systems excel at data processing but struggle with subjective and ethical nuances.
 - Over-reliance on AI in critical sectors (e.g., healthcare, finance) may lead to ethical dilemmas where human intuition is vital.
- **Human-Centric Design: Can AI Truly Understand Human Emotion?**
 - AI systems, especially chatbots and virtual assistants, can respond to emotion but lack deep empathy.
 - Current efforts in affective computing aim to simulate emotion understanding, but the gap between human and machine empathy remains large.



Panelist Position

VENICE
FALL 2024

Key Policy Areas towards Responsible Developments in AI (UNESCO)



AI Explained: Emotion AI Tries to Interpret Human Feelings

BY PYMNTS | AUGUST 19, 2024



| Mood | Probability |
|----------|-------------|
| Happy | 33% |
| Surprise | 3% |
| Disgust | 4% |
| Sadness | 12% |
| Fear | 2% |
| Anger | 3% |
| Neutral | 100% |

Sources: UNESCO (<https://www.unesco.org/en/artificial-intelligence/recommendation-ethics>), PYMNTS (https://www.pymnts.com/wp-content/uploads/2024/08/Emotion-AI_ae35f4.png?w=768)

These illustrations are intended as examples for a panel discussion and not for distribution on the Internet. The rights are held by the original authors; see the linked sources.



Panelist Position

VENICE
FALL 2024

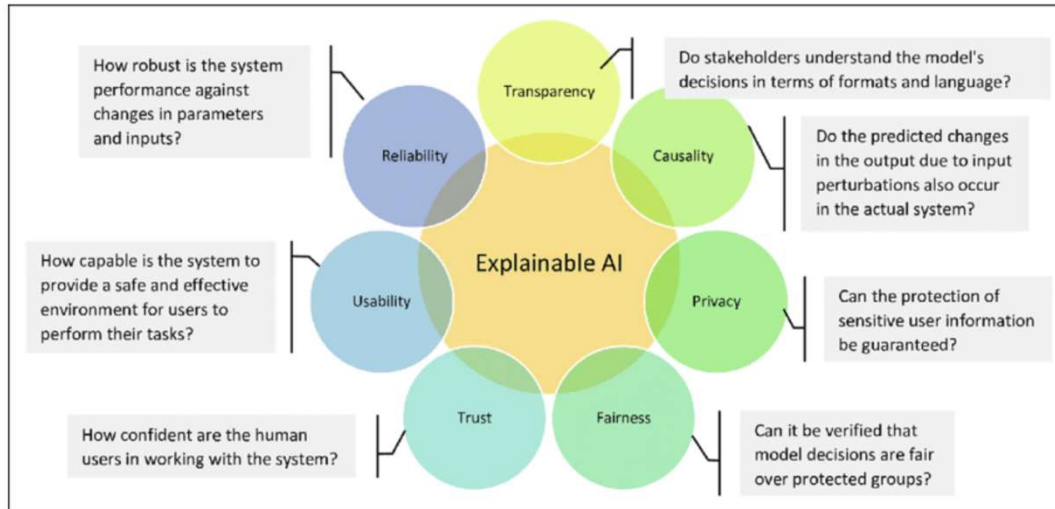
- **The Challenge of AI Interpretability in Human-Centric Systems**
 - "Black-box" AI models, particularly neural networks, often lack transparency, which can lead to trust issues in sensitive applications.
 - Efforts to create explainable AI (XAI) are growing, but balancing transparency and complexity remains a challenge.
- **The Privacy-First Design in AI Systems: Is It Possible?**
 - AI-driven applications heavily rely on vast datasets, which often raises concerns about personal data privacy and ethical data usage.
 - Striking a balance between effective AI performance and rigorous data privacy policies is becoming critical.



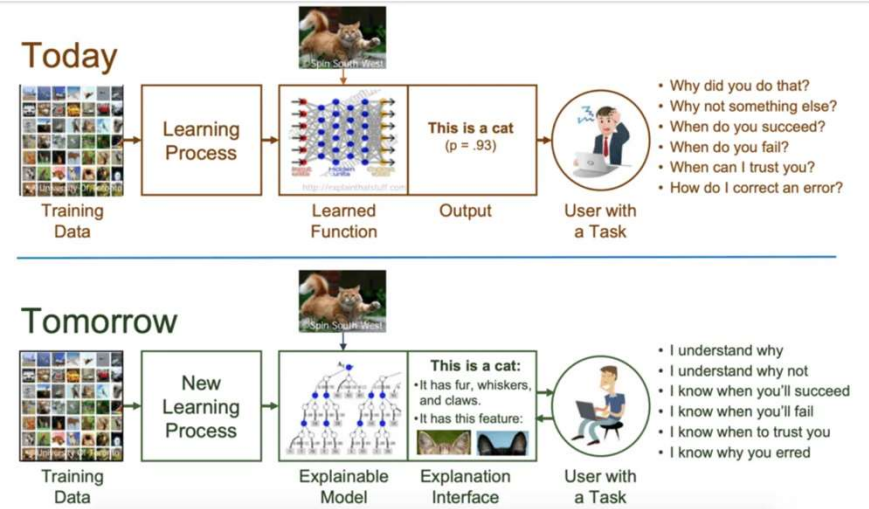
Panelist Position

VENICE
FALL 2024

Key Goals of Explainable AI (Fiok et al. 2021)



Principle of Explainable AI Systems (DARPA)



Sources: Fiok et al. (2021) (https://www.researchgate.net/figure/Goals-of-explainable-AI-XAI_fig1_353200175), DARPA (<https://www.darpa.mil/program/explainable-artificial-intelligence>), Lawtomated (<https://lawtomated.com/explainable-ai-all-you-need-to-know-the-what-how-why-of-explainable-ai/>),

These illustrations are intended as examples for a panel discussion and not for distribution on the Internet. The rights are held by the original authors; see the linked sources.



Panelist Position

VENICE
FALL 2024

- **AI-Augmented Creativity: Enhancing or Stifling Innovation?**
 - AI tools like DALL-E and MidJourney allow creative professionals to generate ideas rapidly.
 - The fear is that reliance on AI could diminish the originality of human-generated content in art, writing, and design.
- **AI as a Partner in Human Collaboration, Not a Replacement**
 - Rather than replacing human jobs, AI can be used to augment human capabilities, especially in sectors like healthcare, education, and legal fields.
 - Human-AI collaboration could lead to a more productive and innovative workforce.



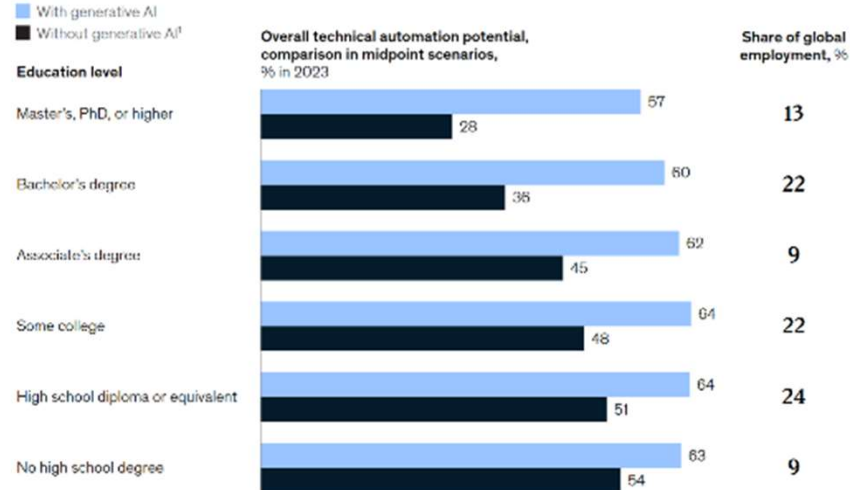
Panelist Position

VENICE
FALL 2024

Exhibit 12

Generative AI increases the potential for technical automation most in occupations requiring higher levels of educational attainment.

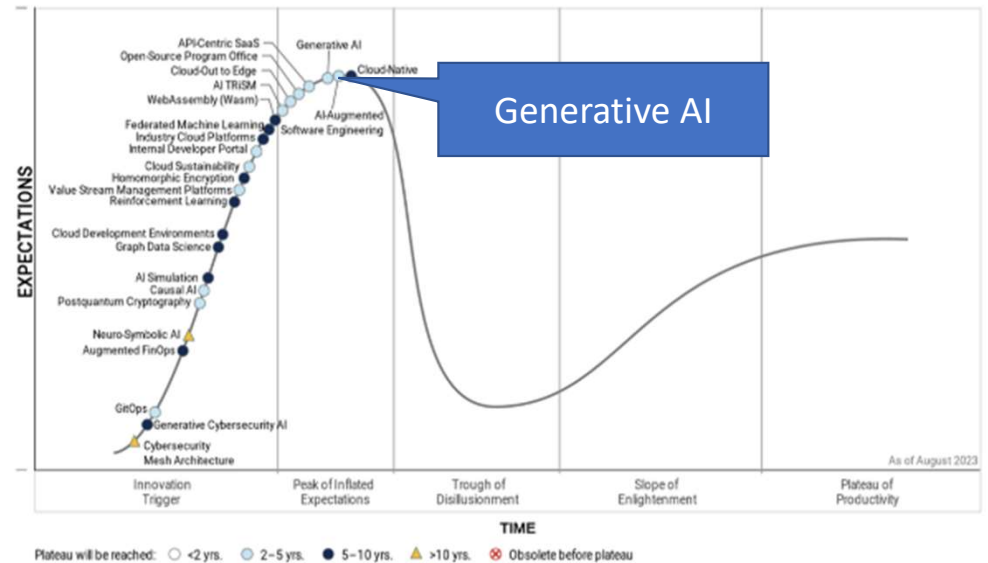
Impact of generative AI on technical automation potential in midpoint scenario, 2023



¹Previous assessment of work automation before the rise of generative AI.
Source: McKinsey Global Institute analysis

McKinsey & Company

Figure 1. Hype Cycle for Emerging Technologies, 2023



Gartner

Sources: McKinsey & Company (<https://www.mckinsey.de/~media/mckinsey/locations/europe%20and%20middle%20east/deutschland/news/presse/2023/2023-06-14%20mgi%20genai%20report%202023/the-economic-potential-of-generative-ai-the-next-productivity-frontier-vf.pdf>), Gartner (<https://www.gartner.com/en/newsroom/press-releases/2023-08-16-gartner-places-generative-ai-on-the-peak-of-inflated-expectations-on-the-2023-hype-cycle-for-emerging-technologies>)

These illustrations are intended as examples for a panel discussion and not for distribution on the Internet. The rights are held by the original authors; see the linked sources.



Panel #3

VENICE
FALL 2024

- 1 Prof. Dr. Stephan Böhm, RheinMain University, Germany
- 2 Prof. Dr. Christelle Scharff, Pace University, USA
- 3 Dr. Antoni Martínez-Ballesté, Universitat Rovira i Virgili, Spain
- 4 Prof. Dr. Jirawat Damrianant, Thammasat University, Thailand
- 5 Prof. Dr. Petre Dini, IARIA, USA/EU



Panelist Position

VENICE
FALL 2024

- **What does AI do for us today?**
 - In our personal life?
 - In our professional life?
 - Is the experience positive? Negative? In the middle?
- **Are there tasks that are un-AI-able?**
- **Is AI replacing humans or augmenting humans?**
- **Is AI replacing or augmenting humans?**
- **Are we trusting AI?**
- **What are the AI Ethics concerns w.r.t. AI human impact?**
 - Personal freedom (autonomy, dignity, privacy)
 - Social wellbeing (fairness, solidarity, sustainability)
 - Technical trustworthiness (performance, safety, accountability)
 - [Brusseau 2021]



Dr. Christelle Scharff
Pace University, NY, USA



Panel #3

VENICE
FALL 2024

- 1 Prof. Dr. Stephan Böhm, RheinMain University, Germany
- 2 Prof. Dr. Christelle Scharff, Pace University, USA
- 3 Dr. Antoni Martínez-Ballesté, Universitat Rovira i Virgili, Spain
- 4 Prof. Dr. Jirawat Damrianant, Thammasat University, Thailand
- 5 Prof. Dr. Petre Dini, IARIA, USA/EU



Panelist Position

VENICE
FALL 2024

▪ Gen AI: your muse and work companion

- In my work, genAI is ***particularly useful*** when writing the introduction section of our n-th scientific paper on a topic.
- Teachers ***are amazed by chatGPT*** and others to generate learning activities tailored to a topic.
- ***GitHub Copilot speeds up coding, it makes you an expert at any programming language, looks like it can read your mind!***



Antoni Martínez-Ballesté
Universitat Rovira i Virgili

Generative AI ***is a very nice work companion***, it never gets tired, always ready to assist!



Panelist Position

VENICE
FALL 2024

▪ GenAI: can you trust your friends?

- If it can write the introduction... What about results, description of a system... etc.? Are genAI systems writing consistent papers on a topic, just from some ideas and data? Ethics and control.
- Dozens of AI-powered tools aimed to teachers and to create learning materials. They spend lots of time editing, changing, ... better doing it from scratch!
- **CS Students experiment with GitHub Copilot** but abandon early on, they confess. Difficulties in communicating with the AI in a precise manner, or effectively debugging...



Antoni Martínez-Ballesté
Universitat Rovira i Virgili



Panelist Position

VENICE
FALL 2024

▪ GenAI: replacing humans?

- **Sept. 2024.** Band Queen has restored and enhanced their first album using AI, and has published a video for the single "The night comes down" ... made with AI.

YouTube comments against the result, the use of AI,
weird, creepy and scary results, disappointed...



Antoni Martínez-Ballesté
Universitat Rovira i Virgili



Panel #3

VENICE
FALL 2024

- 1 Prof. Dr. Stephan Böhm, RheinMain University, Germany
- 2 Prof. Dr. Christelle Scharff, Pace University, USA
- 3 Dr. Antoni Martínez-Ballesté, Universitat Rovira i Virgili, Spain
- 4 Prof. Dr. Jirawat Damrianant, Thammasat University, Thailand
- 5 Prof. Dr. Petre Dini, IARIA, USA/EU



Panelist Position

VENICE
FALL 2024

Finding the Balance in AI Usage: Enhancing or Hindering Human Development?

AI: A Double-Edged Sword

- **Enhancement:** Improves skills like English writing.
- **Dependency:** Over-reliance may hinder self-development.

Technology and Memory

- **Google Maps Analogy:** Reliance on AI, like GPS, impacts our ability to remember directions.
- **Past vs. Present:** From paper maps to AI navigation—what have we lost?

The Balance Challenge

- **Human-AI Collaboration:** AI as a tool to augment, not replace human abilities.
- **Critical Question:** Where is the balance that allows human growth without fostering dependency?

Cost vs. Benefit

- **Resource Consumption:** AI requires significant resources—electricity and data processing.
- **Environmental Impact:** Balancing AI benefits against costs, including global warming.

Societal Considerations

- **Education & Adaptability:** Developing critical thinking in an AI-driven world.
- **Guidelines for AI Use:** Establishing best practices for effective AI integration.



Jirawat
Damrianant
Thammasat Univ.
Thailand



Panel #3

VENICE
FALL 2024

- 1 Prof. Dr. Stephan Böhm, RheinMain University, Germany
- 2 Prof. Dr. Christelle Scharff, Pace University, USA
- 3 Dr. Antoni Martínez-Ballesté, Universitat Rovira i Virgili, Spain
- 4 Prof. Dr. Jirawat Damrianant, Thammasat University, Thailand
- 5 Prof. Dr. Petre Dini, IARIA, USA/EU



Panelist position

VENICE
FALL 2024

▪ Cohabitation on the rise!

- Our society changes, our behavior should, too!
- Extending our brains with technology tentacles

▪ Cohabitation on Educational and Health

- Homework (extending class-work)
- Personalized guideline for home self-healthcare
- Personalized training
- Personalized student advice
- Exercising tools (skills development)

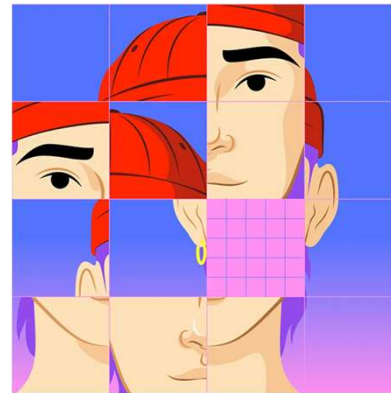
▪ Advanced cohabitation personalized services:

- Cohabitation, Training (skilling, deskilling, and reskilling)
- Designated hallucinations (intentionally crafted)
- Assisting non-expert to produce almost-as-expert output.



Petre Dini
IARIA

Rendering challenge



Recognition challenge





Panelist position

VENICE
FALL 2024

■ Cohabitation on decision systems

■ Assisting: Decision paradigm change

- AI and the Human brain need to be used in conjunction; one is not to replace the others; *bias* and *trade* must be cleared by humans.
- Human + AI-based decisions need *personalized H-AI context-based training*.
- The feedback loop must be updated based in *success-index* of cooperation (see Intelligent Tutorial Systems).
- *Revisit*: Replace - Assist - Advice | Feedback-by-request, Suggestions-by-predictions
- *Validation*: Validate synchronization duration | Validate use case scenarios
- *Flow*: AI (Personalized-AI) & in-Context (Human skills) -->> Assisted decisions

• Personalized AI for critical system resilience

- *Metaverse* is training the AI-based tools with virtual models;
- *Simulations, Digital Twins* accelerate the system deployments, but no real-world environments.
- Latency, reliability, synchronization (for collaborative work)
- *Digital-twin* approach can be used for a dry-training AI-Humans for specific tasks
- *Decision prediction* and *feedback as options*.
- *Updated training* and *real-time impact feedback*.



Petre Dini
IARIA



Panelist position

VENICE
FALL 2024

Interactivity

Google Maps gets a massive AI upgrade with 5 new features
The latest updates to Google Maps makes it smarter and more helpful
<https://www.foxnews.com/tech/google-maps-gets-massive-ai-upgrade-5-new-features>



Petre Dini
IARIA



Google Maps getting major upgrade thanks to new trend taking world by storm



3D with Immersive View

