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Criminal proceedings and the use of AI output as evidence

AI-based Polygraphs

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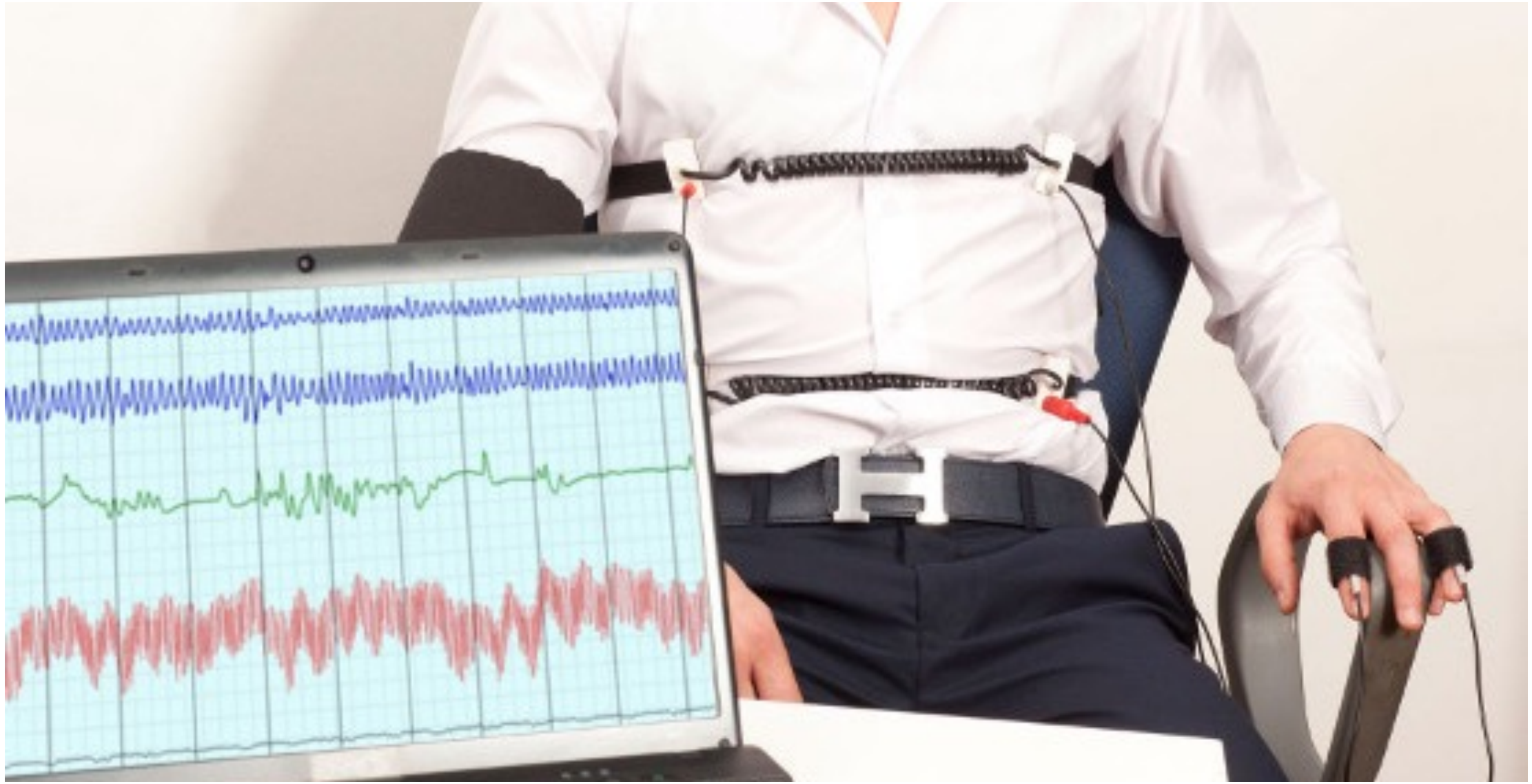
https://images.t3n.de/news/wp-content/uploads/2022/10/shutterstock_2101443238-1.jpg?class=hero

AI-based Polygraphs

- *Ibold* ZStW 2022, 503-534
- *Ibold* ZGS 2024, 10-18
- *Ibold* Künstliche Intelligenz und Strafrecht, Nomos 2024, im Erscheinen

https://www.watson.ch/digital/analyse/945317896-eu-finanziert-luegendetektor-system-fuer-reisende-die-wichtigsten-fragen-und-antworten

https://myce.wiki/news/iborderctrl-ai-lie-detector-tech-questioned-in-eu-court-95927/



https://www.luegendetektortest.net/luegendetektortest-ablauf-und-kosten.html

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I. AI-based Polygraphs

II. AI-based Polygraphs and „judicial conviction“

III. Perspectives – opacity and AI use cases?

AI-based Polygraphs

Scientific assumption	• „Specific lie response“
Machine learning	• data = video and voice recordings • probability of true positive : 85-95 % • data bias • black box

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AI-based Polygraphs and judicial conviction

Reliability

data bias

Explainability

Blackbox effect

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Perspectives – opacity and AI use cases?

Ruling on the PNR Directive:

"It is important to add that use of such technology would be liable to render redundant the individual review of positive matches and monitoring of lawfulness […] given the opacity which characterises the way in which artificial intelligence technology works, it might be impossible to understand the reason why a given program arrived at a positive match. In those circumstances, use of such technology may deprive the data subjects also of their right to an effective judicial remedy enshrined in Article 47 of the Charter […].

European Court of Justice, C-817/19, June 21, 2022

Article 13 (proposal of the AI Act, 8115/21) – Transparency and provision of information to deployers

1. High-risk AI systems shall be designed and developed in such a way to ensure that their operation is sufficiently transparent to enable deployers to interpret the system's output and use it appropriately. […]

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Thank you for your attention!

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