INTERNATIONAL
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VIENNA

AUSTRIAN INSTITUTE OF TECHNOLOGY
TOMORROW TODAY

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH

Trustworthy and Socially Responsible AI

IDSF 2023 – Panel – 2023-09-19

Dr. Ross King

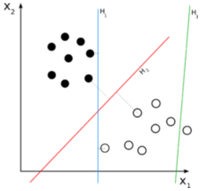
Head of Competence Unit

Data Science & Artificial Intelligence

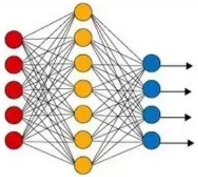
AIT Austrian Institute of Technology

ARTIFICIAL INTELLIGENCE DRIVERS

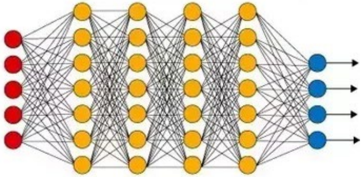
Machine Learning



Classifiers



Neural Networks



Deep Learning

HOW DID WE GET HERE? A TIMELINE

2015: OpenAI founded

2017: Google releases the seminal paper "Attention Is All You Need" *

2018: OpenAI releases GPT-1

2019: OpenAI releases GPT-2

2020: OpenAI releases GPT-3

2022: BigScience collaboration releases BLOOM

2022: 30. November: OpenAI releases ChatGPT

2023: The world of LLMs explodes…

… LLaMA, Alpaca, PaLM2, Claude, Falcon, Llama2, …

* Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A. N., ... & Polosukhin, I. (2017). Attention is all you need. *Advances in neural information processing systems*, *30*.

LARGE LANGUAGE MODELS – THREATS

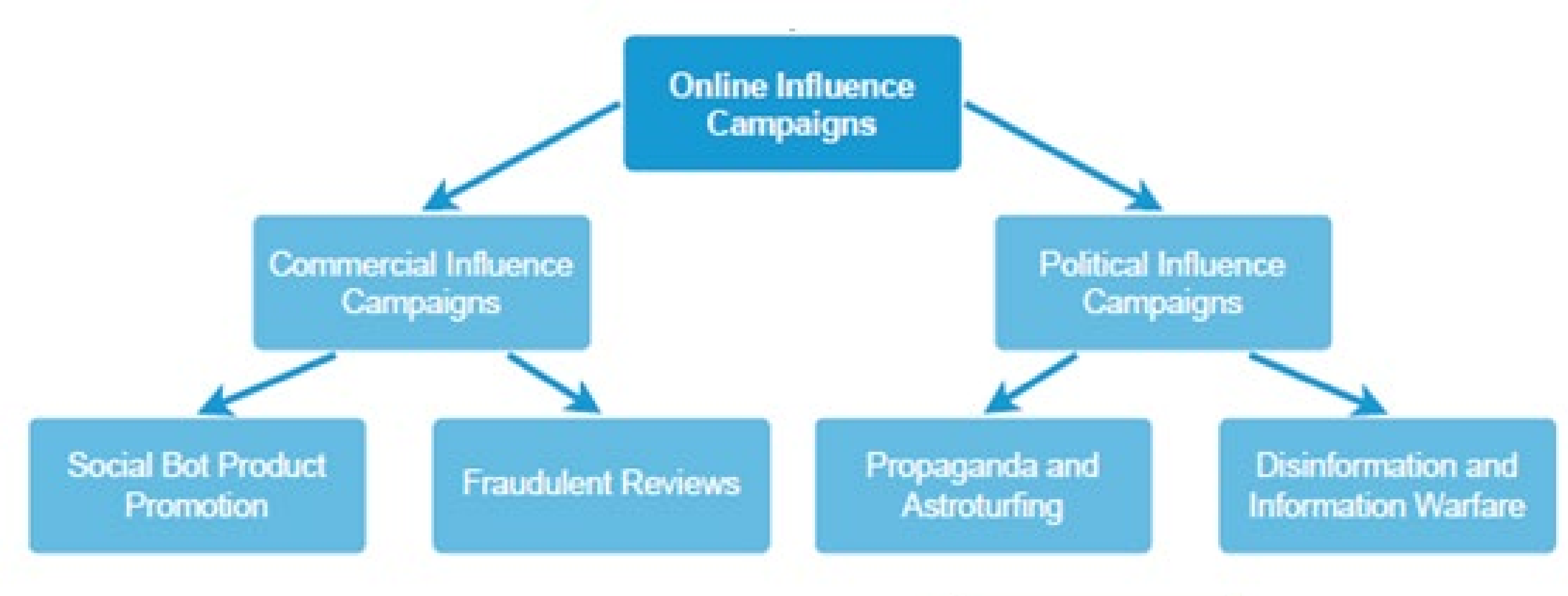

Online Influence Campaigns
Commercial Influence Campaigns
Political Influence Campaigns
Social Bot Product Promotion
Fraudulent Reviews
Propaganda and Astroturfing
Disinformation and Information Warfare

Figure 2 from: Machine Generated Text: A Comprehensive Survey of Threat Models and Detection Methods
EVAN CROTHERS, NATHALIE JAPKOWICZ, and HERNA VIKTOR
arXiv:2210.07321v2 [cs.CL] 19 Nov 2022

THE CHALLENGE: TRUSTWORTHY AND SOCIALLY RESPONSIBLE AI

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How do we ensure the development and deployment of AI systems that prioritize ethics, transparency, fairness, and accountability, while at the same time fostering trust and benefiting society?

- AI Act?
- Trustworthiness by design?
- …?

FAIRe-AI

Fostering Austria's Innovative strength and Research excellence in Artificial Intelligence

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THANK YOU

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