

Topic for Bachelor's Thesis



Title: AI-based lie-detection

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Starting period: immediately

Description:

Human abilities to detect lies based on accessible biological signals are limited. Different AI-based approaches offer better than chance accuracy rates. The goal of this theses is to present current state of the art in AI-based lie-detection and to develop a model-driven experimental design where human participants can use AI advice to detect actual lies of other human participants.

Technology: Python, HTML

Literature to start with:

Constâncio, A. S., Tsunoda, D. F., Silva, H. D. F. N., Silveira, J. M. D., & Carvalho, D. R. (2023). Deception detection with machine learning: A systematic review and statistical analysis. *Plos one*, 18(2), e0281323.

Bond Jr, C. F., & DePaulo, B. M. (2006). Accuracy of deception judgments. *Personality and social psychology Review*, 10(3), 214-234.

Hartwig, M., & Bond Jr, C. F. (2011). Why do lie-catchers fail? A lens model meta-analysis of human lie judgments. *Psychological bulletin*, 137(4), 643.

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