



OpenFact – AI tools for verification of veracity of information sources and fake news detection.  
Financed by National Center for Research and Development in Poland (INFOSTRATEG-I/0035/2021-00).

# Deep fact check AI assisted fact-check protocol with Large Language Models

## Part of PhD dissertation

Marcin Sawiński

Poznań University of Economics and Business

2023-10-25

Motivation. Research questions:

- How to decompose fact-checking process into fine-grained steps?
- How to map fact-checking steps into available tools and methods?
- How to combine individual fact-checking steps into end-to-end solution?
- How to measure success of every step?
- How to automate creating and configuration of the complete process and individual steps?

# LLMs for fact checking

LLMs cannot be used directly for fact checking for multiple-reasons: [1]

- unpredictable outputs
- unreliable reasoning process
- limited knowledge (training cut-off)
- limited context understanding
- expensive to be used at scale

# Process breakdown

# Process



# Process



# Process



# Experiments



Krzysztof Węcel, Marcin Sawiński, Milena Stróżyna, Włodzimierz Lewoniewski, Ewelina Księżniak, Piotr Stolarski, and Witold Abramowicz.

Artificial intelligence—friend or foe in fake news campaigns.

*Economics and Business Review*, 9(2), Jul. 2023.