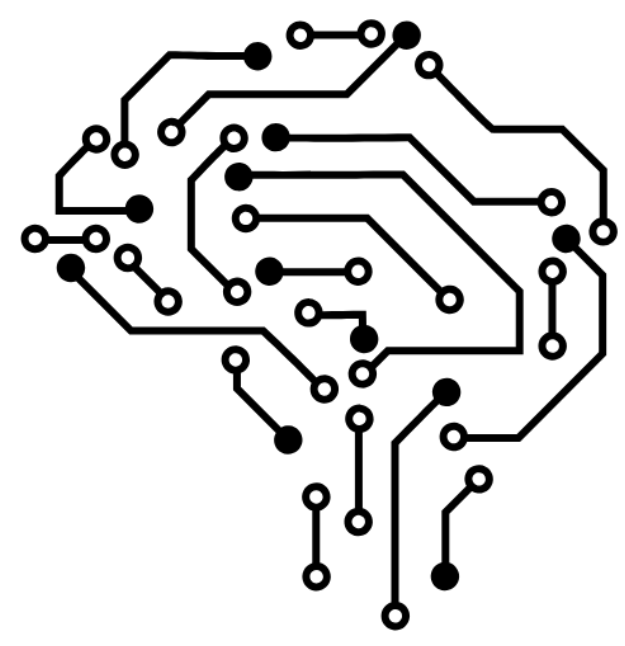


DATA RESEARCH

meetup by MagIC



Going beyond Responsible AI: How Mindsets Shape Emotional Responses and Ethical Perceptions of Artificial Intelligence

Joana Rita Nunes • jrnunes@novaims.unl.pt

NOVA Information Management School (NOVA IMS),
Universidade Nova de Lisboa, Campus de Campolide
1070-312 Lisboa, Portugal

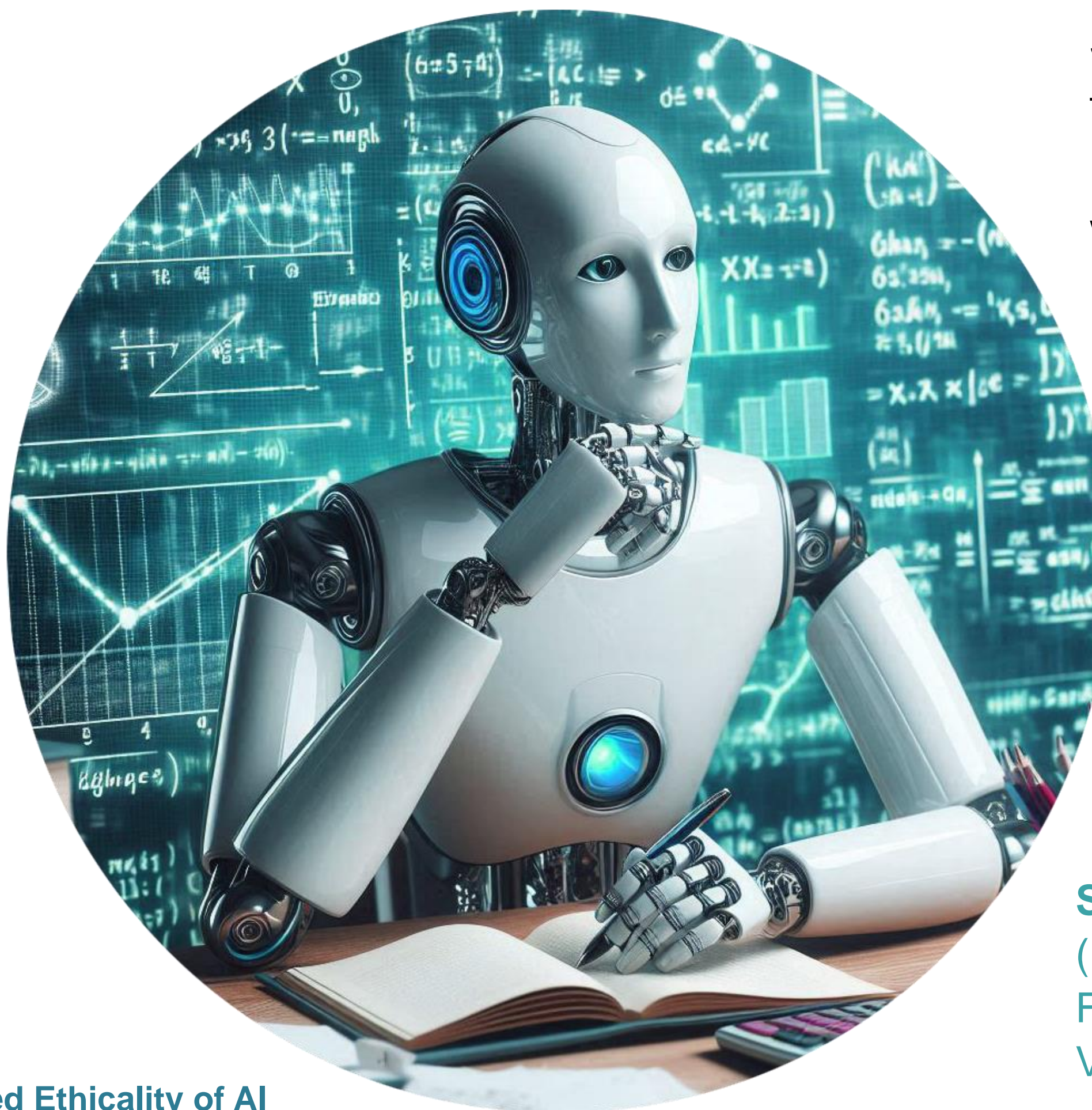
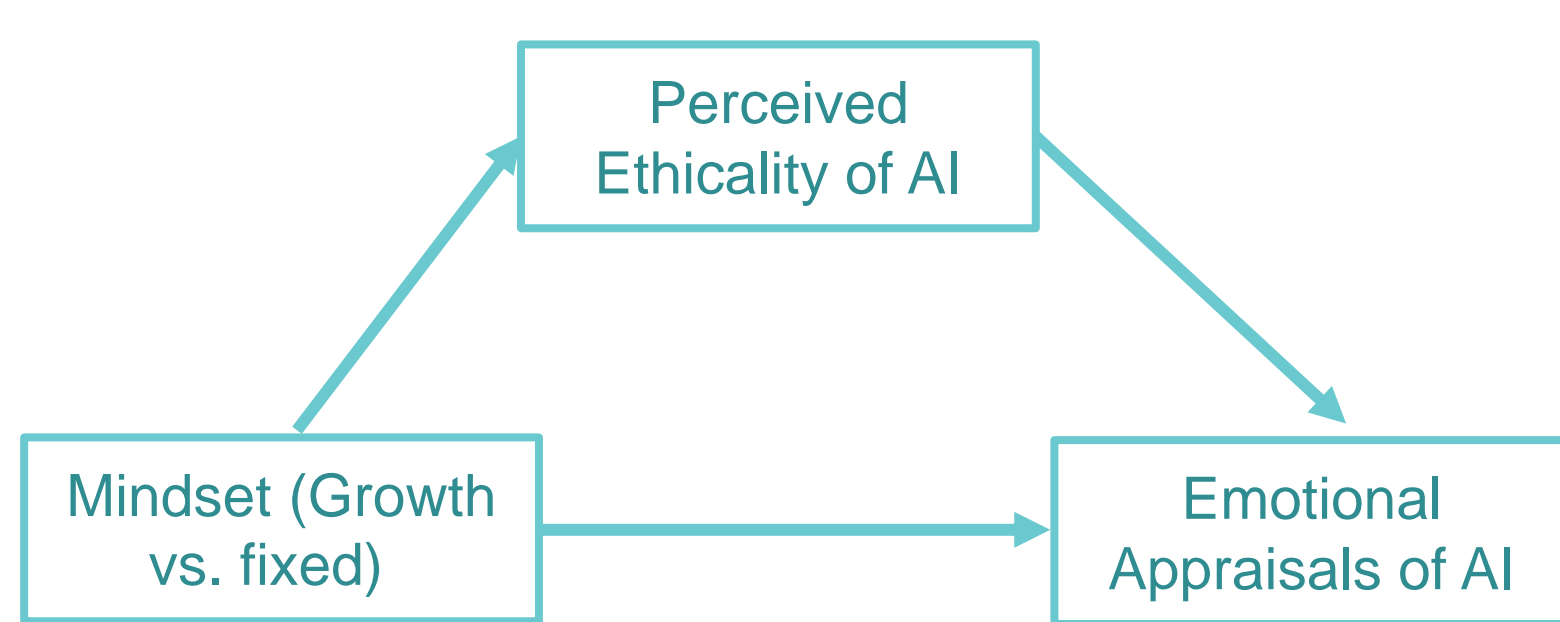
1 INTRODUCTION

- Artificial Intelligence (AI) brought efficient processes (data analysis, pattern recognition, automation, etc.) benefiting organisations and individuals. However, it raised **ethical concerns**, including privacy leakage, discrimination, plagiarism, misinformation or security risks. Understanding **how individuals perceive the ethicality of AI** has become crucial.
- Building on the Implicit Theory of Intelligence, which distinguishes between **fixed and growth mindsets**, and Cognitive Appraisal Theory, emphasizing the role of emotional appraisals in decision-making, this research explores how consumer **mindsets** shape **ethical perceptions** and **emotional responses to AI**.

This research hypothesis:

- H₁**: A growth (vs. fixed) mindset leads to a better perceived ethicality of AI.
- H₂**: A better perceived ethicality of AI increases the positive emotional appraisals of AI.
- H₃**: The relationship between mindset type and emotional appraisals is mediated by perceived ethicality of AI.
- H₄**: A growth (vs. fixed) mindset increases the willingness to accept AI.

Conceptual Model (mediation)



3 RESULTS & DISCUSSION

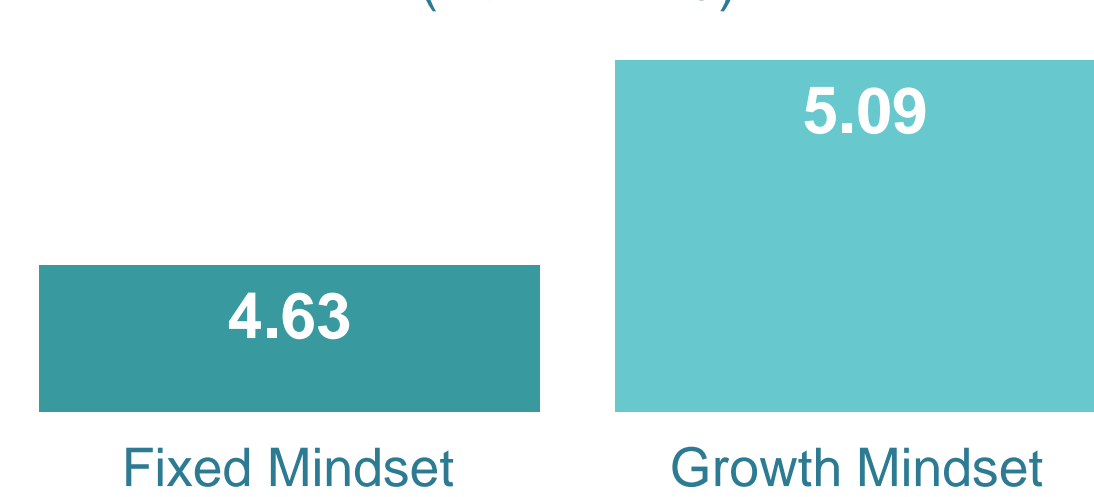
STUDY 1

Users	Positive Emotion	Negative Emotion
Growth Mindset	86%	39%
Fixed Mindset	14%	61%

STUDY 2

- Participants with a **growth mindset** showed **better ethical perceptions of AI** (more Moral, Fair, Solidary, and Loyal). The mindset type had no direct impact on the willingness to accept AI.

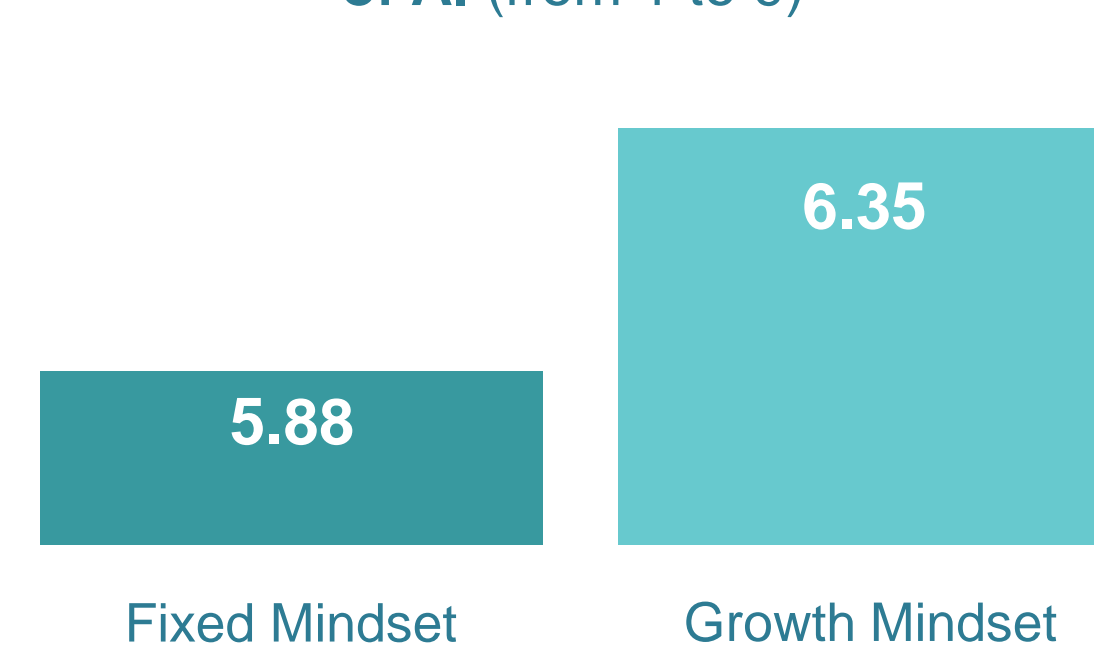
Perceived Ethicality of AI (from 1 to 9)



STUDY 3

- Participants with a **growth mindset** showed higher **positive appraisals** (e.g. Enthusiasm, Inspiration, Determination) and **better ethical perceptions** (considered AI to be Fair, Legal, Respectful and Innocent). **Mediation analysis**: **Perceived ethicality** influenced **positive emotional appraisals** of AI.

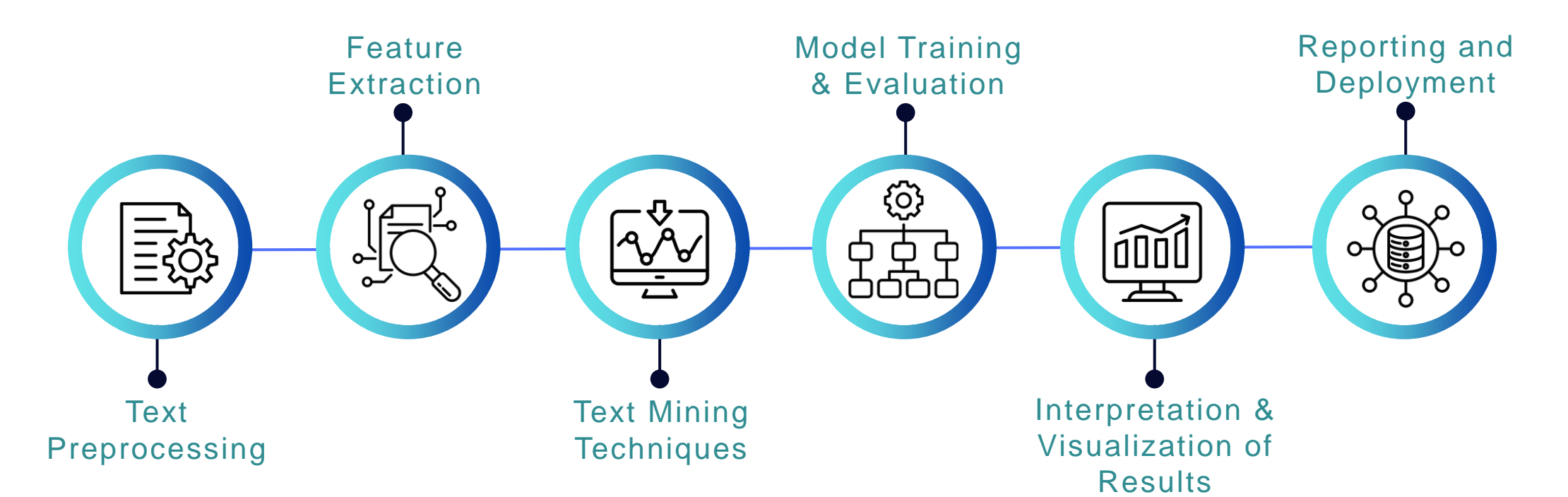
Positive Appraisals of AI (from 1 to 9)



2 METHODS AND MATERIALS

TEXT MINING

STUDY 1: Data from 169,017 reviews of ChatGPT. **GOAL:** Explore whether people with a growth (vs. fixed) mindset perceive AI as more ethical and if this perceived ethicality influences the emotional responses.



EXPERIMENTAL STUDIES

STUDY 2: 99 Portuguese participants from Prolific (39.4% female, 60.6% male), +18 years old. **GOAL:** Test the influence of mindset type on the perceived ethicality and the willingness to accept AI.

STUDY 3: 120 Portuguese participants from Prolific (36.7% female, 62.5% male), +18 years old. **GOAL:** Test if there is a mediation effect of perceived ethicality between the mindset type and emotional appraisals of AI.

Studies 2 and 3 included a scenario to activate either a growth or fixed mindset, with a subsequent range of Likert questions.

Software: IBM SPSS Statistics / Natural Language Toolkit (NLTK) library / Term Frequency-Inverse Document Frequency (TF-IDF) / CountVectorizer (Machine Learning) / VADER (Valence Aware Dictionary and sEntiment Reasoner).

4 CONCLUSION

- A **growth mindset** improves **perceived ethicality of AI**, confirming **H₁**.
- Higher **ethical perceptions** of AI enhances **positive emotional appraisals**, supporting **H₂** and **H₃**.
- Contrary to **H₄**, mindset type did not influence participants' **willingness to accept AI**. **Future research:** Test other factors (e.g. trust, empathy) that may play a larger role.

Theoretical contribution: This research bridges theories on the ethicality of AI, the implicit mindsets, and the role of emotional processes.

Practical insights: In addition to its social contribution by exploring the perception and use of AI in an ethical and responsible way, this research helps to understand the factors that influence consumers' ethical perceptions and acceptance of AI products/ services.

ACKNOWLEDGMENTS

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