

AI for Society: Human-Centered AI

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PhD Background: AI-Powered Cognitive Adaptive Systems (2016-2021)

Postdoc Real-World Application 1: SmartHelm (2021-2023)

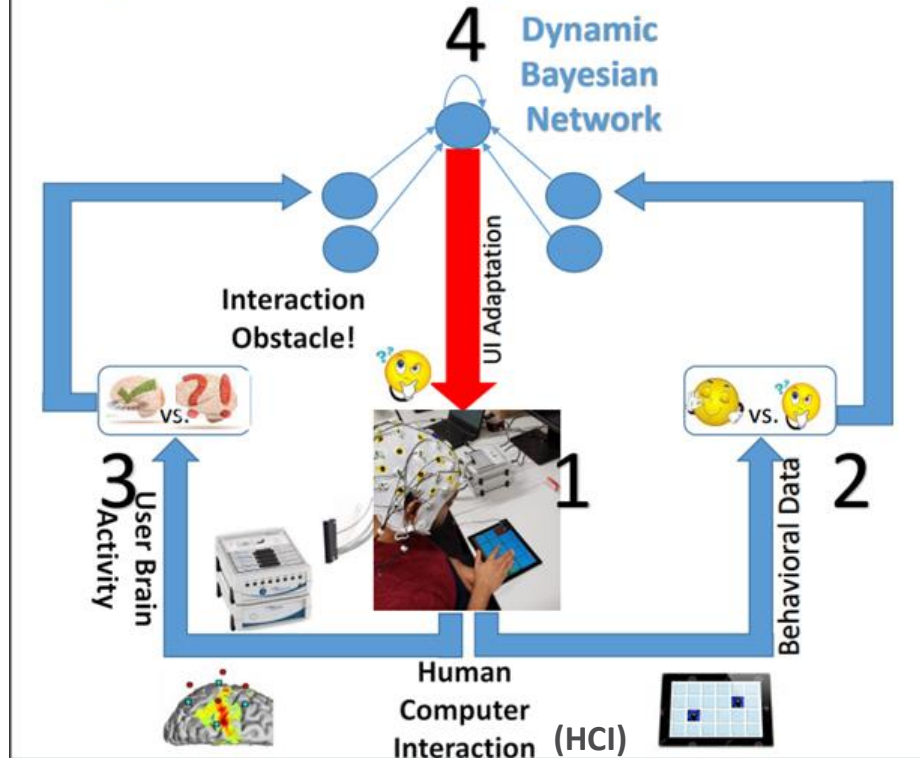
Postdoc Real-World Application 2: ABILITY (2022-2025)

Postdoc Real-World Application 3: BUKI (2023-2024)

StartUp: MozaicAI (starting in 2024)

Contact

Cognitive Adaptive Model



- Obstacle detectors in (2) and (3) are fed with data from several HCI sessions coming from (1)
- Predictions and confidences: data distributions are produced by (2) and (3)
- High confident and low confident predictions can be learned by the probabilistic model: (4)

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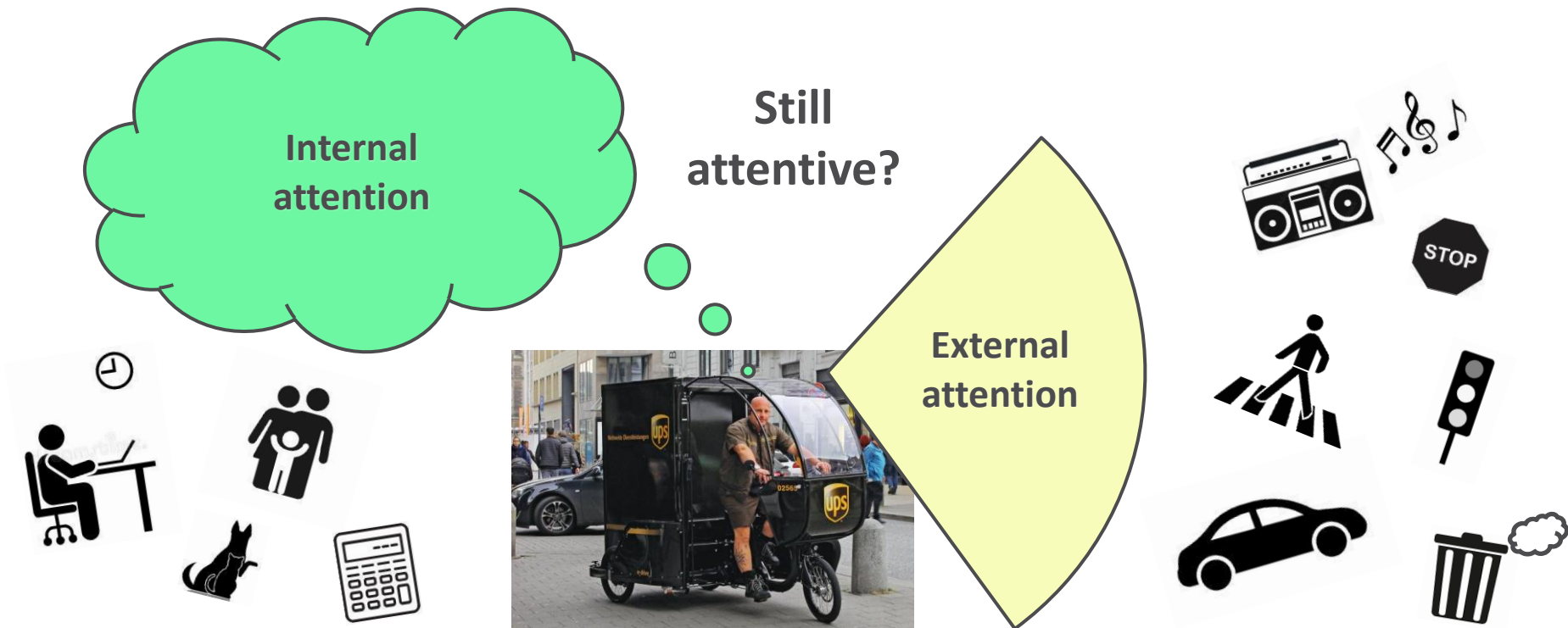
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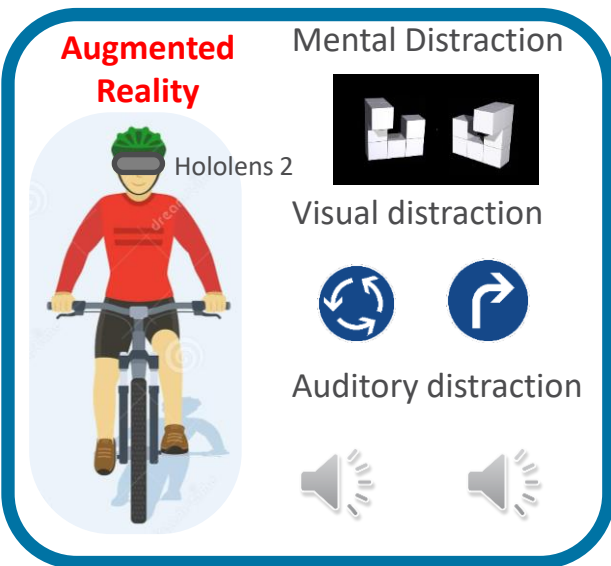
Task: Cargo-Cyclist Attention Modeling



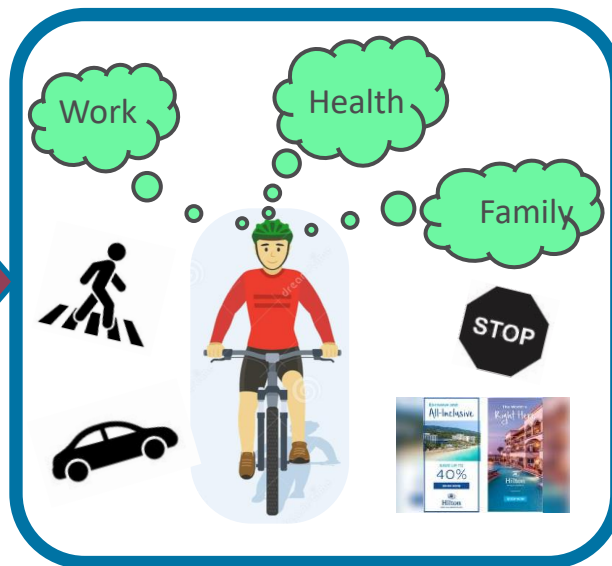
User Studies Overview: From Lab to Field!

- From **simulated** attention distractions to **real** attention distractions, until Helmet's **prototypes**

Study 1: **simulated** distractions
Simulation Study



Study 2: **real** distractions
Field Study



Study 3: **Helmet prototypes**
Prototype Study





Smart·Helm

Der intelligente Fahrradhelm

SmartHelm:
Attention-Sensitive
Smart Helmet for Cargo Cyclists



Outline

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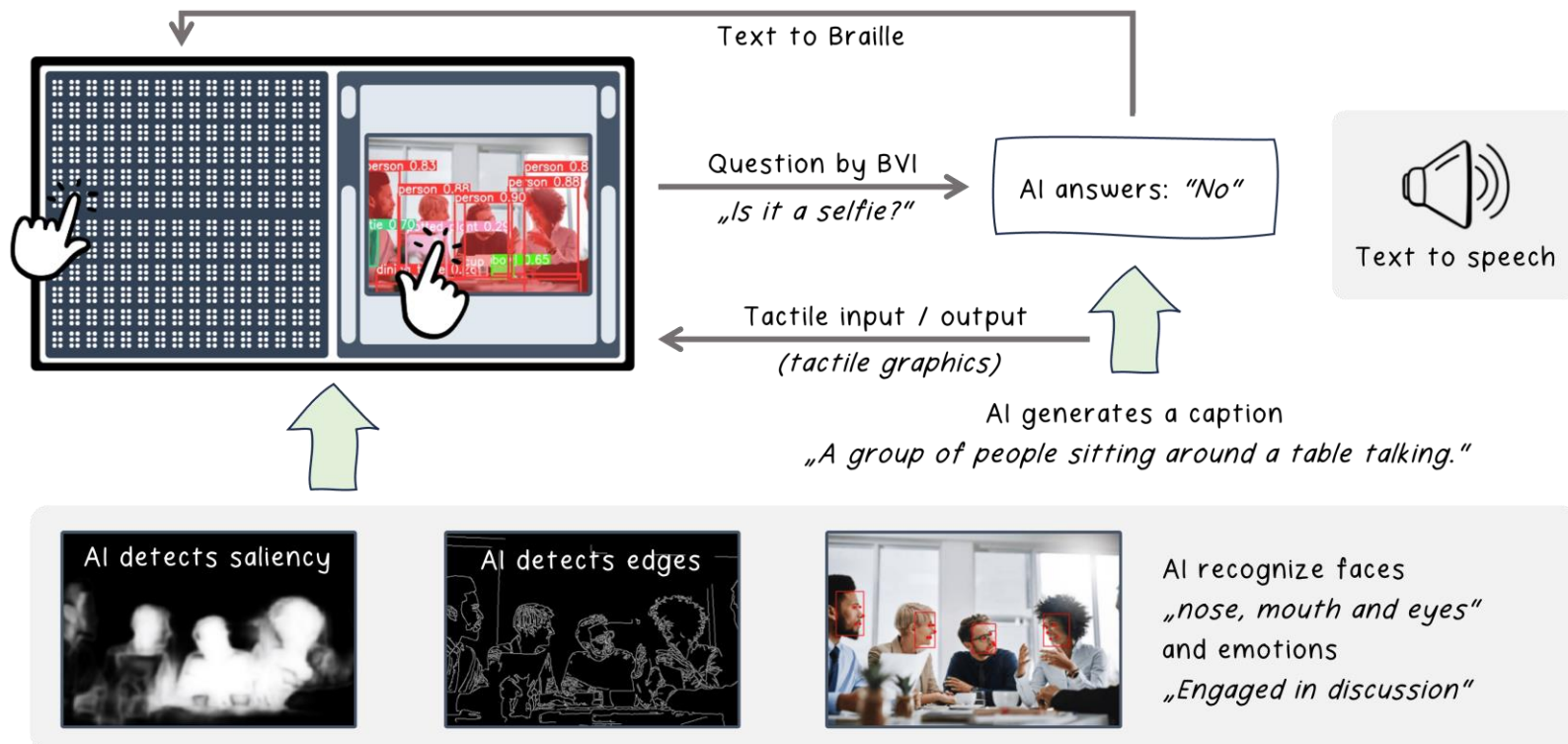
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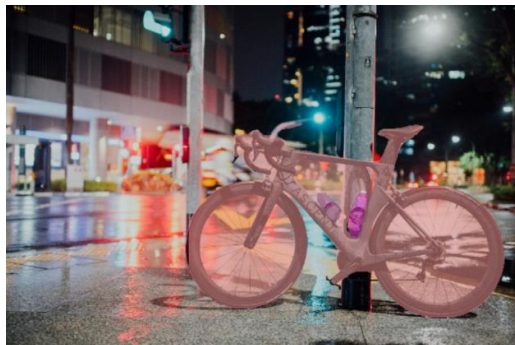
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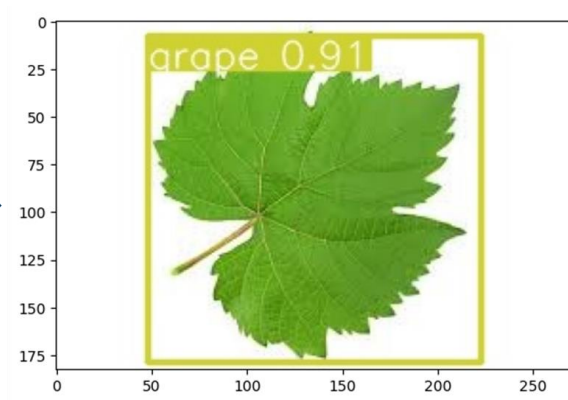
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ABILITY: AI Outputs for the Accessible Tablet

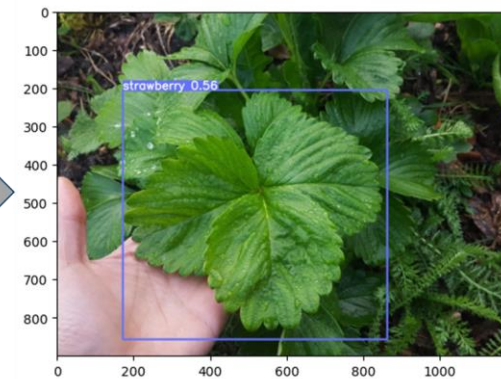


ABILITY: AI Outputs for the Accessible Tablet



This is a grape leaf

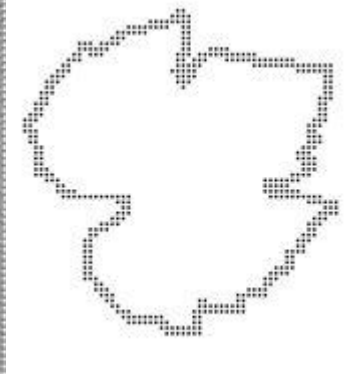
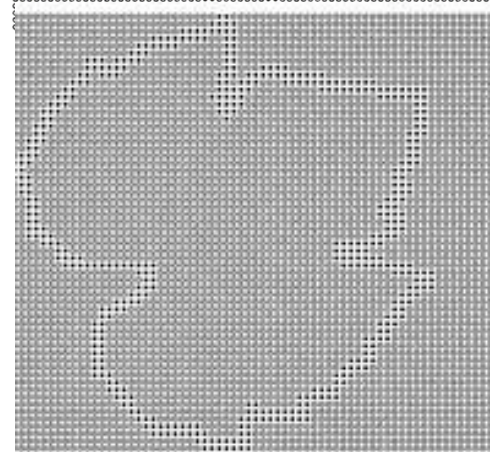
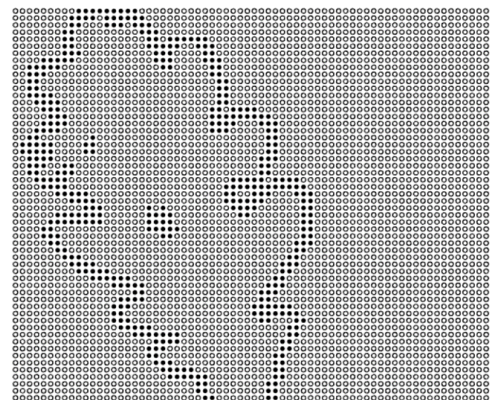
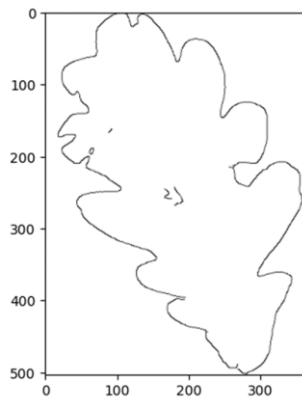
detected correctly



A strawberry leaf

Detected correctly

ABILITY: AI Outputs for the Accessible Tablet







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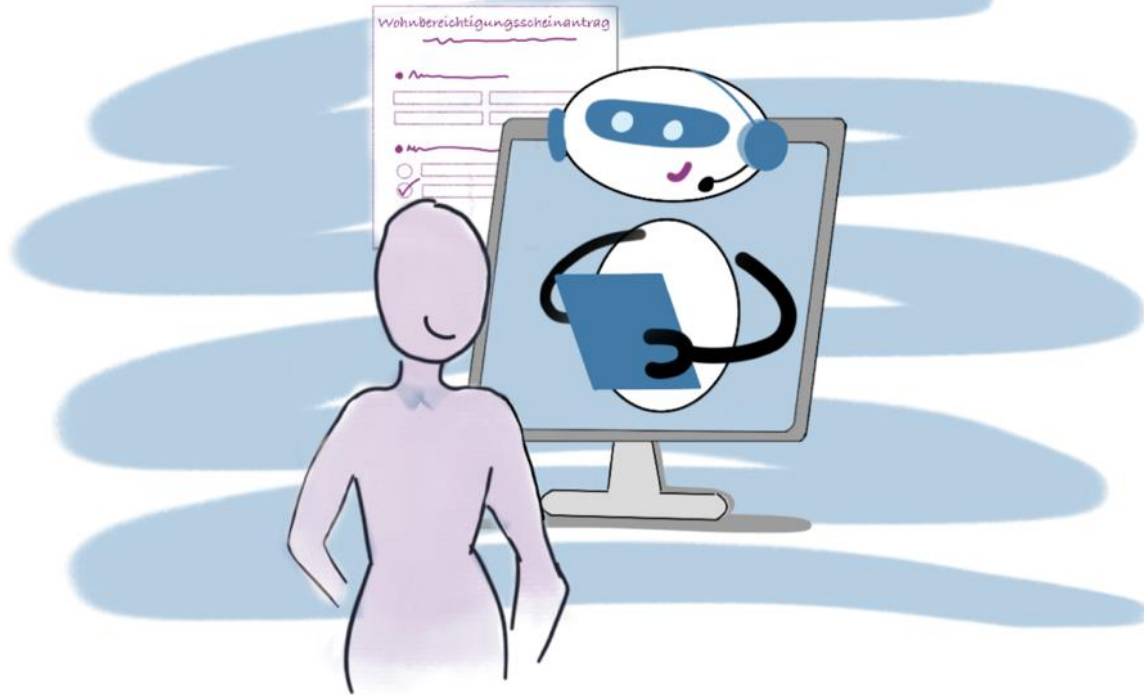
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RESET

LOAD DUMMY

SET EMPTY



Deine Anträge

Wählen einen Antrag, um fortzufahren.

Wohnberechtigungsschein

Fortsetzen



Antrag 1

Anfangen



Antrag 2

Bereit



Antrag 3

Anfangen



Antrag 4

Anfangen



Hast du eine Frage?

Frage BUKI





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➤ **MozaicAI Idea: AI for everywhere in the society**

➤ **MozaicAI Progress:**

1. Foundation: might be supported by „Das Technologie- und Gründzentrum Oldenburg“ (TGO)
2. Proposals for companies:
 - I. In Germany: Power Development Assistant
 - II. Abroad: Multi-lingual Paraphrasing AI-powered Teacher

Chat History

Executed Code



Console Output

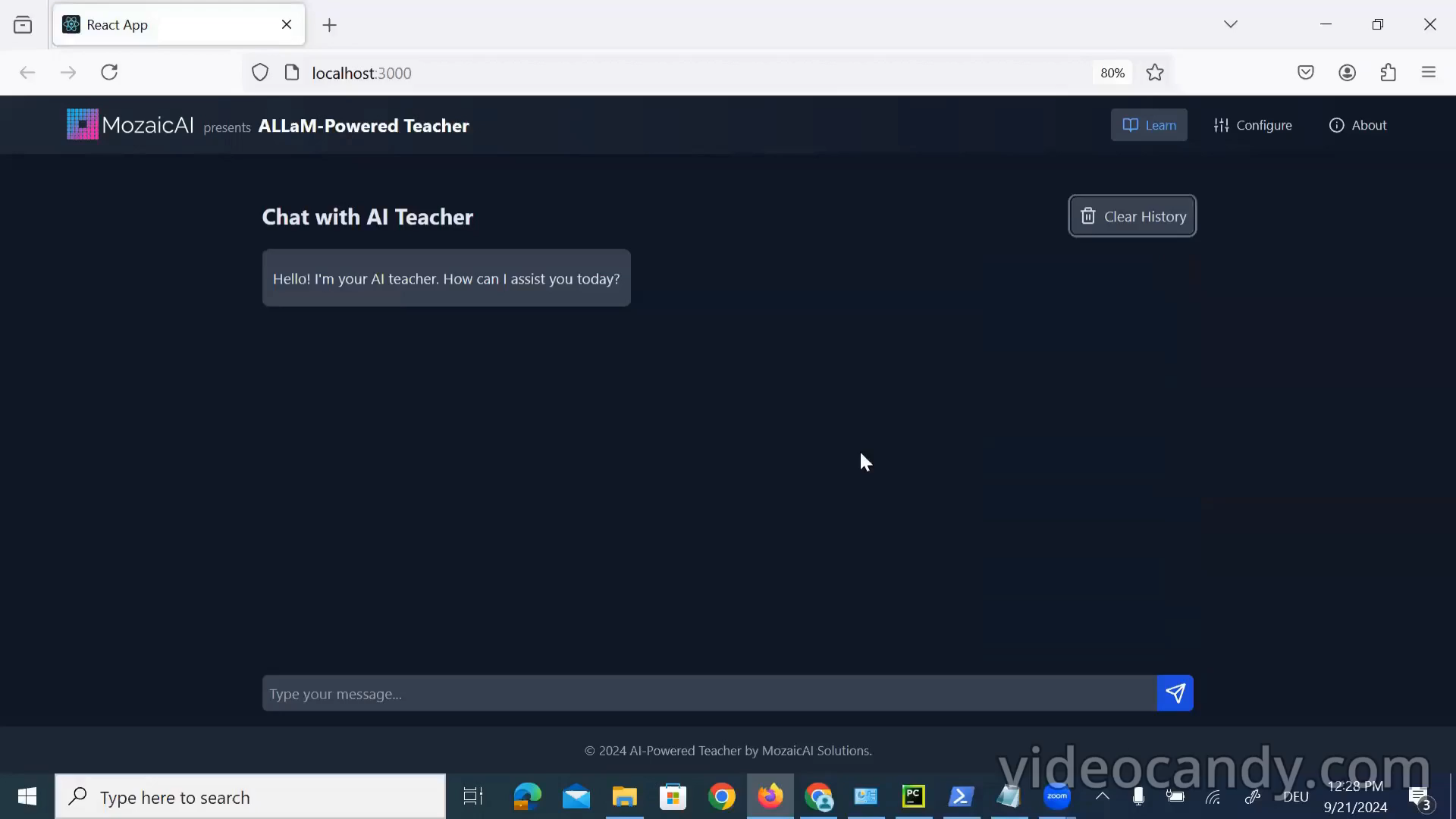
Hello! I'm your AI coding assistant. How can I help you today?

open p|



Send

☒ Execute Code



Chat with AI Teacher

[Clear History](#)

Hello! I'm your AI teacher. How can I assist you today?

Type your message...



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Society Department, OFFIS Institute for Information Technology

