

Ruben de Boer

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PROFILE

Master's student in Artificial Intelligence at Utrecht University with a strong interest in language models, reliable AI systems, and machine learning in complex, dynamic environments. Experienced with prompt engineering, Git, the OpenAI API, and structured evaluation of LLM outputs through academic and project work. I communicate clearly in Dutch and English and enjoy applying AI to practical, domain-specific systems.

SKILLS

- **Programming languages:** Python, C++, C#, SQL
- **ML & AI:** OpenAI API, Machine learning, Prompt engineering, LLM evaluation, LangChain RAG
- **Technologies:** Git/Version control, Jupyter, VS Code, Linux
- **Languages:** Dutch (native), English (fluent)

EDUCATION

- **Master Artificial Intelligence**
Utrecht University, average: 7.5/10 *Sep 2025 – Present*
 - **Master thesis (planned):** Federated Learning with heterogeneous, partially labelled streaming data
 - **Relevant courses:** Intelligent Agents, Advanced Machine Learning, Natural Language Reasoning
- **Bachelor Computer Science**
Utrecht University, minor AI, average: 7.6/10 *Sep 2022 – Jul 2025*
 - **Relevant courses:** Software Engineering, Algorithms, Responsible Data Science, Computational Intelligence
- **Honours Program Computer Science**
Utrecht University *Sep 2022 – Jul 2025*

PROJECTS

- **Domain-Specific Chatbot with RAG:** Developed a Retrieval-Augmented Generation chatbot answering university questions. Built the system with the OpenAI API and LangChain RAG in Python, iteratively testing prompts for consistent, fast, relevant and natural responses.
- **LLM Agent for Consistent Text Generation:** Built an ontology aware LLM agent using LangChain, OWL and SPARQL to connect generated text to structured domain knowledge. Designed the agent to detect and fix logical inconsistencies in text.
- **Natural Language Inference via First-Order Logic:** Designed and ran a structured evaluation of LLM-based formal logic generation on the FOLIO dataset using approximately 1,000 prompts. Compared LLM outputs with a symbolic baseline to evaluate language-to-logic conversion.
- **BSc Thesis Project:** Developed parallel algorithms and web-based benchmarking tools for efficient palindrome detection in text. Worked in a Scrum-based team as Scrum master, using Git and YouTrack for version control, planning and issue tracking.

ACADEMIC EXPERIENCE

- **Teaching Assistant**
Utrecht University *Sep 2023 – Present*
 - **Activities:** Delivered 200+ hours of tutorials and grading across 9 university computer science courses. Supporting students independently during tutorials, explaining technical concepts clearly.
 - **Subjects:** Mathematical logic, programming in Python, 3D modelling (Python), computer architecture and networks, physical computing

EXTRA CURRICULAR

- **Study Association Sticky Utrecht:** Organized 25+ educational, networking and recruitment events across multiple committees, collaborating with students, companies, and university staff.