BATU HELVACIOĞLU

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Github
Linkedin

I am pursuing a Master's degree in Artificial Intelligence at the University of Amsterdam, with the goal of becoming an AI Researcher in industry. My current research interest is hallucinations in foundational models. Previously I tackled data limited tasks in computer vision and NLP.

EXPERIENCE

Yapı Kredi Teknoloji, Istanbul — *R&D Engineer Intern* JULY 2021 - MAY 2023

- **Publication:** Contributed to "*Long Form Question Answering Dataset Creation Using Noise Added Siamese BERT*", published in KDIR 2022. Validated our method with additional datasets and assisted in integrating the method to company systems.
- **Sentiment and Emotion Analysis:** Developed sentiment and emotion analysis models on short-format Turkist text data. These models were used to analyze customer chats, providing insights to improve our chatbot.
- **Named Entity Recognition Research:** Researched named entity recognition on Turkish short format text.
- **Document Processing System Enhancement:** Improved the performance of an object-detector based document processing system with data augmentation.

EDUCATION

University of Amsterdam, Amsterdam — *MSc in Artificial Intelligence* SEPTEMBER 2023 - JULY 2025

- **Fairness, Accountability, Credibility, and Transparency in AI:** Conducted a reproduction study on "*GNNInterpreter: A probabilistic generative model-level explanation for Graph Neural Networks*" which was accepted by TMLR for MLRC2023.
- **Deep Learning 2:** Explored the relationship between hallucinations in LLMs and training data in the embedding space. Initially documented findings as a blogpost, expanding to publish it as a full research paper.
- **Foundational Models:** Developed a novel benchmark to measure hallucinations in grounded visual language models. Project is being further expanded and refined with the aim of publishing it as a research paper.

Koç University, Istanbul — *BSc in Computer Engineering, B.A. in Business Administration*

SEPTEMBER 2018 - JUNE 2023

- **Artificial Intelligence Track:** Completed coursework in Intro to AI, Intro to ML, Reinforcement Learning, Computer Vision with Deep Learning, Deep Learning, and Unsupervised Deep Learning.
- **Computer Vision:** Developed a parking occupancy detection model with object detectors.
- **Thesis Project:** Led the development of AI components for a Computer Vision Based Web Scraper, including an image classifier, object detector, and sentiment analysis model.

PUBLICATIONS

Helvacioglu B., et al., "[Re] GNNInterpreter: A probabilistic generative model-level explanation for Graph Neural Networks," *TMLR.*, 2024.

Çekiç, T., Manav, Y., Helvacıoğlu, B., Dündar, E. B., Deniz, O., and Eryigit, G. "Long Form Question Answering Dataset Creation for Business Use Cases using Noise-Added Siamese-BERT." KDIR 2022.

ACHIEVEMENTS

University of Amsterdam GPA: 7.06/10

Koç University GPA: 3.59/4.00

2077th out of ~2.1M students in the university entrance exam.

33rd out of ~1.1M students in the high school entrance exam.

SKILLS

Independent and collaborative research experience

Experience with CV, NLP, and LLMs.

Python (Torch), Java

English, Turkish