

MAHMUT ZAHID GOKSU

[✉ mahmutgoksu@protonmail.com](mailto:mahmutgoksu@protonmail.com)

[LinkedIn](https://www.linkedin.com/in/mahmut-goksu-136204226) [linkedin.com/in/mahmut-goksu-136204226](https://www.linkedin.com/in/mahmut-goksu-136204226)

[GitHub](https://github.com/MAHMUTGOKSU) github.com/MAHMUTGOKSU

Education

KOC UNIVERSITY

Bachelor of Science in Computer Engineering

ISTANBUL, TURKEY

Experience

NewMind AI

Software engineering intern

Istanbul, Turkey

July 2022 – August 2022

- Developed an object detection model capable of solving CAPTCHAs for web scraping tasks.
- Implemented a speech-to-text system to transcribe meeting recordings with accuracy and efficiency.

QCRI-Qatar Computing Research Institute

ML Engineering Intern

Qatar, Doha

March 2023 - April 2023

- Created an offensive language detection model based on Twitter data, utilizing natural language processing techniques.
- Developed a system to analyze and predict offensive content from text data, improving content moderation.

NewMind AI

ML Engineering Intern

Istanbul, Turkey

July-2023 - September 2023

- Engineered a recommendation system using collaborative filtering, leveraging user interaction logs for tailored suggestions.
- Built a graph database using Neo4j and implemented node embedding algorithms for node prediction task.
- Researched and presented various node embedding algorithms, explaining their applications and comparing the advantages and limitations of different approaches.

TUBITAK BILGEM

Research Intern

Istanbul, Turkey

June 2024 – September 2024

- Implemented an attack on DES with 4, 6, and 8 rounds using differential cryptanalysis
- Presented research on differential cryptanalysis on DES like systems
- Researched different authentication protocols such as Kerberos, Needham-Schroder, and Woo-Lam, and presented findings
- Explored various versions of TLS/SSL and prepared presentation material on the topic

NewMind AI

ML Engineer

Istanbul, Turkey

August 2025 – Present

- Engineered a custom tokenization pipeline utilizing a Byte-Pair Encoding (BPE) algorithm enhanced with morphologically aware merging to improve subword segmentation.
- Pre-trained BERT and RoBERTa models using the Nemo Framework.
- Developed a microservice for serving Large Language Models (LLMs) and dynamically loading LoRA adapters Using Lorax.

Certificates and Achievements

KOC UNIVERSITY

- Relevant Coursework: Operating Systems (COMP304), Machine Learning (COMP421), Artificial Intelligence (COMP341), Deep Learning (COMP441), Computer Vision with Deep Learning (COMP411), Reinforcement learning (COMP438), Deep Unsupervised Learning (COMP447)

COMP411 Course Project

- Trained Marigold, a monocular depth estimation model, using a custom Mars landscape dataset for depth estimation and image reconstruction.
- Evaluated Marigold against DepthCrafter, DepthAnything, and DepthPro on the custom Mars dataset to benchmark performance and accuracy.

COMP441 Course Project

- Developed an instruction-tuning dataset using the TextileNet dataset to enhance textile classification of the TVL Multi-modal LLM.
- Trained the TVL (Touch-Vision-Language) model on a custom dataset for accurate fabric and fiber classification. The aim of this project was to identify if this tactile information embedded in the model improved classification in textile classification tasks.

COMP438 Course Project

- Developed RL agents to master Mangala, a Turkish strategy game, achieving 74-77% win rate against baseline agents when playing first.
- Implemented Monte Carlo Tree Search with policy/value networks and TD-Gammon with minimax lookahead using PyTorch.
- Optimized agent performance through replay buffers and epsilon-greedy exploration.

COMP447 Course Project

- Investigated internal mechanisms of multimodal LLMs for visual question answering by implementing a logit-lens on the Gemma3 model to analyze intermediate representations and model reasoning.
- Applied mechanistic interpretability through sparse autoencoders to learn sparse and interpretable features, which were then tested on the GQA dataset.
- Designed an automated pipeline that leverages LLMs to perform ablations on learned sparse features, enabling systematic evaluation of how feature manipulations influence model behavior.

IELTS

- 7/9

Technical Skills

Languages: English - Native, Turkish - Native

Programming Languages: Python, C , Java, Scheme, C++

Technologies/Frameworks: Git , Pytorch, Docker, Elasticsearch, NEO4j, Scikit-Learn, Singularity, Nvidia NEMO Framework

Nationality

- Canada & Turkey