TOLGA IZDAS

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EDUCATION

Bachelor of Science in Computer Engineering Expected Graduation: Jun 2025
Yildiz Technical University Istanbul, Turkiye

- GPA: 3.64/4.0
- Relevant Coursework: Big Data Processing and Analytics, Artificial Intelligence, Image Processing

PROFESSIONAL EXPERIENCE

Software Engineer Intern Jul – Sep 2024
Turk Telekom Izmir, Turkiye

- Designed a database for the company inventory from scratch using SQLite.
- Implemented an interface and database operations, including authorization and data integrity measures, using the Django framework.
- Improved the data retrieval and processing speeds, contributing to more efficient inventory management.

Software Engineer Intern Jul – Sep 2023
SESTEK Istanbul, Turkiye

- Developed a product that summarizes provided voice input using JavaScript and API.
- Added a module to an existing product that allows the user to read sent HTTP data in a web interface, facilitating real-time data analysis and visualization.
- Gained insights into agile practices through daily and weekly meetings.

RESEARCH EXPERIENCE

Research Scholar Jul 2024 – Mar 2025
COSMOS AI Research Group Istanbul, Turkiye

- Conducted benchmarks on large language models (LLMs) using few-shot learning, contributing to the advancement of model evaluation techniques.
- Created datasets for evaluating text generation models, ensuring high-quality data for accurate model performance assessments.
- Fine-tuned LLMs for specific tasks, improving their performance in domain-specific applications.
- Developed and maintained scripts to automate model evaluation and analysis.

PROJECTS

COSMOS LLM Evaluation Tool Jul 2024

- Developed a tool to evaluate large language models such as GPT, BERT, and LLaMA on a variety of tasks with support for few-shot learning.
- Implemented custom evaluation metrics for accuracy and perplexity, enhancing the tool's functionality and user experience.
- Established a modular architecture to allow for easy integration of additional models and evaluation tasks in the future.

Undergraduate Project: Occupation Prediction from Twitter Data Mar 2024

- Developed a project to predict occupations from Turkish tweets under the supervision of Prof. Banu Diri.
- Applied machine learning (ML) and natural language processing (NLP) techniques to analyze and classify Twitter data.
- Explored the impact of dataset size on model performance, achieving high accuracy in classification tasks.

PUBLICATIONS

- T. Izdas, H. Iskifoglu, and B. Diri (2024). "Occupation Prediction from Twitter Data." *Dokuz Eylul University Faculty of Engineering Journal of Science and Engineering (DEU FMD)*. (Accepted)

COURSEWORK

Big Data Processing and Analytics

- Gained hands-on experience with distributed systems, large-scale data processing, and recommender systems.
- Completed a project that evaluated the performance of Apache Hadoop in processing large datasets by applying various statistical functions.

Artificial Intelligence

- Studied fundamental AI concepts, including search algorithms, optimization methods, gradient descent, and stochastic processes.
- Implemented various projects using Genetic Algorithms and Q-Learning techniques to solve complex problems and enhance decision-making in AI systems.

Image Processing

- Explored core image processing techniques such as filtering, segmentation, and edge detection.
- Implemented algorithms for image recognition, and classification, and engaged in various related projects.

Information Retrieval and Web Search Engines

- Investigated web mining techniques to analyze and extract valuable insights from social media data.
- Implemented information retrieval algorithms to effectively extract relevant information and enhance search functionalities.

AWARDS AND HONORS

STAR Intern Researcher Scholarship Jul 2024
TUBITAK (Scientific and Technological Research Council of Turkiye)

- Awarded a scholarship as a research intern in the project titled "New Approaches for Text Representation and Text Generation with Neural Language Models" conducted by Prof. Mehmet Fatih Amasyali at Yildiz Technical University Computer Engineering Department.

ACCOMPLISHMENTS

National Science Olympiads in Computer Science May 2019
TUBITAK (Scientific and Technological Research Council of Turkiye)

- Ranked 55th out of 600 students in the National Science Olympiads in Computer Science.

CERTIFICATIONS

- Red Hat System Administration I & II - RH124 & RH134 Jan 2025
- Red Hat OpenShift I: Containers & Kubernetes - DO180 Jan 2025

SKILLS

Technologies: Python, Java, C, SQL, JavaScript, Jupyter Notebook, MATLAB
Libraries: TensorFlow, PyTorch, NumPy, Pandas, Keras, scikit-learn, Matplotlib, Apache Hadoop, Django
Tools: Git, Google Colab, Hugging Face, Kaggle, PyCharm

LANGUAGES

Turkish: Native
English: Fluent | TOEFL iBT: 98/120