Kuntay Yilmaz

kuntay.yilmaz@metu.edu.tr | linkedin.com/in/kuntay-yilmaz | github.com/KuntayYilmaz

Education

Middle East Technical University — Turkey
Bachelor of Science in Computer Engineering — Expected Graduation: June 2027

- **GPA: 3.56**

Experience

Research Intern — July 2025 – August 2025
METU NLP Research Group

- Research and Development on Data Annotation System under the supervision of Asst. Prof. Dr. Çağrı Toraman.

Undergraduate Teaching Assistant — October 2024 – January 2025
Middle East Technical University

- Supported **36** students in **Python** programming by helping them debug code, improve programming logic, and grasp key concepts.
- Guided students in solving algorithmic problems and implementing efficient solutions.

Projects

Fine-Tuned GPT-2 (124 M) for Shakespearean Text Generation — November 2024
Technologies: PyTorch, Python, Hugging Face

- Fine-tuned a pretrained GPT-2 124M model using **PyTorch** and the **Hugging Face** Transformers library on the **Tiny Shakespeare** dataset to generate coherent and stylistically accurate Shakespearean text.
- Implemented data preprocessing and tokenization with **tiktoken**, handling large-scale text data while maintaining model compatibility.
- Optimized training performance by techniques such as **gradient accumulation**, **learning rate scheduling**, and mixed-precision training**(BF16)** to enhance computational efficiency.

Neural Network from Scratch: Fashion MNIST Classification — September 2024
Technologies: Python, NumPy, Matplotlib

- Developed a **MLP Neural Network** from scratch using **Python** and **NumPy**, targeting image classification for the **Fashion MNIST dataset**, which contains **70,000** grayscale images across 10 categories.
- Designed custom dense layers with **ReLU and Softmax** activation functions, incorporating **L2 regularization** and dropout layers to mitigate overfitting.
- Achieved **90% test accuracy** through hyperparameter tuning using validation data.

2D Game Engine with a Space Shooter Prototype — June 2024
Technologies: C++, SFML, Box2D, CMake

- Developed a custom 2D Game Engine using **C++** and **SFML** for rendering and integrated an open-source physics library to handle collisions.
- Demonstrated engine capabilities through a space shooter prototype, implementing core gameplay elements such as player controls and enemy spaceships.

Extra-Curricular Activities

Algorithm Competition Winter Camp 2025 — February 2025

- Ranked **1st** in a team contest among **23** students at a one-week-long algorithm camp organized by **Inzva** in 2025.
- Ranked **32nd** in the Qualification Round for the algorithm camp among **321** students from across Turkey.
- Contest Link

Technical Skills

Languages & Tools: Python, C, C++, OpenGL, Git
Frameworks: PyTorch, NumPy, pandas, Matplotlib
Topics of Interest: Real-Time Graphics, Novel View Synthesis, Deep Learning