

# Kuntay Yilmaz

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## EDUCATION

### Middle East Technical University

Turkey

Bachelor of Science in Computer Engineering

Expected Graduation: June 2027

- **GPA: 3.81**
- **Relevant Courses:** C Programming, Python Programming, Data Structures, Calculus 1-2-3, Linear Algebra, Discrete Math, Differential Equations, Statistics

## EXPERIENCE

### 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(124M) 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++, Git

**Frameworks:** PyTorch, NumPy, pandas, Matplotlib

**Concepts:** Large Language Models, Deep Learning, Computer Graphics, Novel View Synthesis