Kuntay Yilmaz

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EDUCATION

Middle East Technical University | Turkey
Bachelor's of Science in Computer Engineering | *Expected Graduation: June 2027*

- **Grades**: **3.95 GPA, High Honor**
- **Relevant Courses**: C Programming, Computing in Python, Data Structures, Calculus 1-2-3, Linear Algebra, Discrete Computational Structures, Differential Equations

EXPERIENCE

Undergraduate Lab Assistant | October 2024 – Present
Middle East Technical University

- Supporting students in **Python programming** by helping them debug code, improve programming logic, and grasp key concepts.
- Assisting students with algorithmic problem-solving and the implementation of fundamental algorithms.

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 of large-scale text data and maintaining model compatibility.
- Optimized training performance by techniques such as **gradient accumulation**, **learning rate scheduling**, and **mixed-precision training** 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 to **avoid overfitting.**

Pong Game Implementation | *July 2024*
Technologies: C++

- Developed a classic Pong game from scratch **without using a traditional game engine**, leveraging **C++** and the Raylib library for graphics rendering.
- Emphasized **object-oriented programming** by organizing code into multiple header and source files for each class, enhancing modularity and maintainability.

CERTIFICATIONS

Machine Learning Specialization
Stanford University, by Andrew Ng (DeepLearning.AI)

- Supervised Learning (linear regression, logistic regression, neural networks) and Unsupervised Learning (k-means clustering, anomaly detection).

TECHNICAL SKILLS

Languages & Tools: Python, C, C++, Git
Frameworks: PyTorch, NumPy, pandas, Matplotlib
Concepts: Large Language Models, Data Structures and Algorithms, Object-Oriented Programming