Yunus Kocaman

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Education

Brandeis University Waltham, PA

Bachelor of Science in Computer Science *Aug. 2022 – May 2026*

Coursework:

Data Structures and Algorithms, Object Oriented Programming, Fundamentals of Software Engineering, Operating Systems, Intro to Machine Learning, Intro to Computer Security, Intro to Probability and Statistics, Calculus, Linear Algebra, Discrete Structures, Natural Language Processing, Embedded Systems,

Experience

Civic and Community Engagement Sep. 2022 – Present

Boston Education and Counseling/Youth Mentor *Revere, MA*

- **Mentored and Supervised 30+ Students:** Provide weekly academic, social, and spiritual guidance to middle and high school students (grades 6–12), ensuring comprehensive support.
- **Led a group of 7 Mentors:** Manage and mentor a team of five, equipping them with effective strategies to support student development.
- **Facilitated 15+ Youth Retreats:** Organized and led 7–10 day retreats focused on personal growth, leadership, and mentorship training.

Projects

YumJunction | *JavaScript, CSS, HTML, React, Azure Services, Docker* Jan. 2024 – May 2024

* Led a team of students in developing a full-stack web recipe application using React and Node.js
* Built a backend server to store and manage recipe data, integrating JSON-based APIs and CosmosDB for scalable storage.
* Designed a dynamic front-end with React and Tailwind CSS, allowing users to add and share their recipes.
* Implemented Azure Services for cloud hosting, automated deployment, and monitoring.
* Set up alerting mechanisms for backend services to ensure reliability and performance.
* Utilized Docker for containerized deployment, ensuring consistency across development and production environments.

Unix Shell Simulator | *Java, Multithreading, Concurrency, Thread Synchronization* Aug. 2024 – Jan. 2025

* Developed a Unix-like shell with a fully functional Read-Eval-Print Loop (REPL) supporting essential shell commands (pwd, ls, cd, cat, grep, wc, etc.).
* Implemented the Pipes and Filters architecture to support command chaining (| operator), enabling seamless data flow between commands.
* Enhanced shell capabilities with error handling, ensuring robust input validation and appropriate system responses for incorrect commands.
* Optimized command execution by efficiently parsing and handling user inputs while adhering to Unix shell conventions.

Fraud Detection | *Python, Scikit-Learn, Pandas, NumPy, Matplotlib, Seaborn, Imbalanced-learn* March 2024

* Explored multiple machine learning models for fraud detection, including Logistic Regression, Decision Trees, and K-Nearest Neighbors (K-NN)
* Engineered and optimized features using imbalanced dataset techniques (SMOTE) to improve fraud classification in skewed datasets.
* Implemented a data preprocessing pipeline with Pandas and NumPy, handling missing values, feature scaling, and outlier detection to enhance model performance.
* Visualized dataset distributions and fraud patterns using Matplotlib and Seaborn, refining feature selection and model interpretability.

Technical Skills

Languages: Java, Python, MicroPython, C, JavaScript, HTML/CSS
Frameworks: React, Node.js, Flask, JUnit,
Developer Tools: Git, Docker, Azure Services, Flask, Kali Linux
Libraries: pandas, NumPy, Matplotlib, Scikit-learn