

Yunus Kocaman

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EDUCATION

Brandeis University

Bachelor of Science in Computer Science

Waltham, MA

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,

PROJECTS

YumJunction | *JavaScript, CSS, HTML, React, Azure Services, Docker*

- Led a team of students in developing a **full-stack** web recipe app using **React** and **Node.js**, acting as the point of contact with the PM (TA)
- 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 prod environments.

Unix Shell Simulator | *Java, Multithreading, Concurrency, Thread Synchronization*

- 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.

NLP Projects Repository | *Python, NLP, Machine Learning, Probability Models, Feature Extraction*

- Developed **NLP models** for **language modeling**, **POS tagging**, and **text classification**.
- Implemented **n-gram models** with **Laplace smoothing** and **MLE** to estimate sequence probabilities.
- Built a **Naive Bayes classifier** for **sentence segmentation** and **sentiment analysis**.
- Developed an **HMM-based POS Tagger** using **Viterbi** and **Greedy Decoding**.
- Trained a **Multiclass Perceptron** for **language identification** with **learning rate decay**.

EXPERIENCE

Civic and Community Engagement

Boston Education and Counseling/Youth Coordinator

Sep. 2022 – Present

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 team of 7 Mentors:** Manage and mentor a team of seven, 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.

TECHNICAL SKILLS

Languages: Java, Python, C, JavaScript/TypeScript, Swift, SQL

Full Stack Development: React, Next.js, HTML/CSS/Tailwind, Node.js, Flask, JUnit,

Cloud services: CosmosDB, MongoDB, Firebase, AWS, Azure, PostgreSQL, SQLite

Developer Tools: Git, GitHub Docker, Azure Services, Flask, Kali Linux, Scrum, Agile Development, Object-Oriented Programming (OOP), NLP concepts, RESTful API

Libraries: Pandas, NumPy, Matplotlib, Scikit-learn, Bootstrap