Ege (Ethan) Usel

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EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY Berkeley, CA
Computer Science, Bachelor of Arts Jun 2021 - May 2023

UNIVERSITY OF CALIFORNIA, BERKELEY Berkeley, CA
Bioengineering, Bachelor of Science Aug 2018 - May 2023

WORK EXPERIENCE

SOFTWARE ENGINEER, Amgen Inc. Remote, US | May 2024 – present

- Built a scalable **Python**-based "Data Dictionary" web app to streamline metadata exploration across Amgen's data lake; built a **Spark/Databricks/AWS** pipeline supporting search, filtering, caching, SQL snippet generation via Dash frontend.
- Designed and implemented **Java** backend modules to retrieve and transform high-volume supply-chain datasets from Databricks into in-memory simulation objects, enabling real-time scenario modeling in the platform's computation engine.
- Built a full-stack supply chain tool using **React**, **Python**, **Flask**, SVGs, and **graph algorithms** to map product dependencies across global pipelines; enabled dynamic exploration of alternate BOMs during shortages, boosting manufacturing reliability.
- Developed features for CCT platform, using React **micro frontends** orchestrated via **Single-SPA**, **Typescript**, and a **Java** backend; enabled real-time supply planning, exception handling, and notifications—improving operational efficiency globally.
- Engineered a **GenAI** tool integrated with Veeva CDOCS to extract data from PDFs using **LLM**-based methods; automated downstream document generation, saving hundreds of hours annually for Amgen's manufacturing teams.
- Owned, modernized, and maintained legacy Flask-based web apps Pilot Plant, Material Lookup, and Clinical Suite.

SOFTWARE ENGINEER, 909 Technologies San Francisco, CA | Jul 2023 – Apr 2024

- Contributed to full-stack development of CCPS, a large-scale clinical placement platform, by implementing backend logic and REST controllers in **Java** (**Spring Boot**) based on Jira specs, delivering production-ready code under tight sprint timelines.
- Designed data models and service-layer logic using **object-oriented design**; wrote and optimized JPQL queries, used **ER** diagrams to define relationships between persisted objects (ORM), and maintained schema versioning with **Liquibase**.
- Built a Quartz scheduler-based **notification system** and integrated a custom email service to alert users of upcoming rotations; developed **RESTful APIs** for the mobile app team, and enforced role-based access control.
- Enhanced application performance via **asynchronous processing** and **multithreading**, reducing load times by up to **60%**.
- Participated in code reviews and daily stand-ups following **Agile** practices.

R&D ENGINEER INTERN, Sentromer DNA Tech Inc. Istanbul, Turkey | Apr 2021 – May 2021

- Developed **Java-based lab automation tools**, including a codon optimization algorithm for synthetic biology workflows, using Monte Carlo simulations & sliding window analysis to optimize gene expression.
- Assisted in R&D lab operations, contributing to COVID-19 test kit development, presented research findings to the team.

SKILLS

Technical Skills: Java, Python, C/C++, Golang, Swift, SQL, HTML, CSS, JavaScript, TypeScript, OOD, OOP, Spring Boot, Git, CI/CD, AWS (S3, RDS, EC2), SDLC, Unit Testing, Integration Testing, React, Node.js, Express.js, Next.js, Microservices, NoSQL, Containerization, Docker, K8s, TCP, Cryptography, Terraform, browsers, Webkit, macOS, UIKit, SAP, Plotly Dash
Relevant College Coursework: Data Structures, Computer Architecture, Efficient Algorithms, Internet Architecture & Protocols, Computer Security, UI Design & Dev, Database Systems, Data Science, Machine Learning, Operating Systems

PROJECTS

NumC Jul 2022

- Wrote Numpy-like library in **C** which can perform efficient matrix and vector operations, using C memory management.
- Used SIMD instructions implemented via Intel Intrinsic, **thread-level parallelism** using **OpenMP** API.

Internet Protocols API Implementation Nov 2022

- Implemented Distance Vector Protocol in **Python**, utilizing distributed algorithms for **intradomain routing** with split horizon and route poisoning. Built a **Socket API** with **TCP** for reliable communication, dynamically updating retransmission timeout value based on Round Trip Time to avoid sending duplicate packets.

Secure Data Storage System Oct 2022

- Built an **encrypted file sharing system** in **Go**, incorporating cryptographic measures like password hashing, symmetric encryption, and HMACs for data integrity. Features included authentication, secure sharing with digitally signed invitations.

CRM with AI-Powered Insights Jul 2023

- Built **Java**-based CRM **web application** with **microservices** architecture, utilizing Spring Framework (Boot, MVC, Data JPA, Security), Thymeleaf, HTML, CSS, JavaScript, and **MySQL**. Containerized the application using Docker for portability, hosted the database in **AWS RDS**, and integrated OpenAI GPT-4 to generate **real-time sales data analytics.**

Other Notable Mentions (Available on my website)

- Gitlet (Java), Snake Game (C++), 2048 Board Game (Java), Enigma Machine Simulator (Java), Scheme Interpreter (Python)