

# Ege (Ethan) Usel

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## EDUCATION

### UNIVERSITY OF CALIFORNIA, BERKELEY

Computer Science, Bachelor of Arts

Berkeley, CA

Jun 2021 - May 2023

### UNIVERSITY OF CALIFORNIA, BERKELEY

Bioengineering, Bachelor of Science

Berkeley, CA

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.
- 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.
- Built a full-stack supply chain tool using **React**, **Flask**, **SVGs**, and **graph algorithms** to map product dependencies across global pipelines; enabled dynamic exploration of alternate BOMs during shortages, boosting manufacturing reliability.
- Optimized Genealogy **ETL** with **PySpark**, achieving over 50% faster runtime through parallelization and algorithm tuning.

### 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, SQL, JavaScript, TypeScript, HTML, CSS, OOD, OOP, Spring Boot, React, Node.js, Git, CI/CD, AWS (S3, RDS, EC2), SDLC, Azure, Unit Testing, Integration Testing, Microservices, NoSQL, Neo4j, Containerization, Docker, K8s, TCP, TLS, Cryptography, Terraform, AI Agents, Langchain, RAG, Virtual Machines, Assembly

**Relevant College Coursework:** Data Structures, Computer Architecture, Efficient Algorithms, Internet Architecture & Protocols, Computer Security, Database Systems, Operating Systems, UI Design & Dev, Data Science, Machine Learning

## PROJECTS

### Gitlet

Nov 2021

- Built Gitlet, a **Java**-based version control system with Git-like commands that track staged, deleted, and modified files. Used SHA-1 for versioning, Java I/O for file operations, and the Java Serialization API to persist state in a hidden .gitlet repo.

### 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.

### 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.

### 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**.