

# Sunny (Feiyang) Guan

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## EDUCATION

Carnegie Mellon University, Pittsburgh, PA

May 2025

B.S. in Computer Science, concentration in Machine Learning, GPA: 4.0/4.0

**Relevant courses:** Distributed Systems, Database Systems, Computer Graphics, Deep Learning, ML with Large Datasets

## EXPERIENCE

Robinhood

May 2024 - Aug 2024

*Security Software Engineer Intern, Authentication Platform Team*

- Implemented a **Go**-based microservice and initiated multiple **gRPC** endpoints to track **1 million** users' GPS locations and lockout users in restricted regions.
- Achieved **99% cache hit** rate by designing new cache policies and **90% cost reduction** through switching to AWS Location Service
- Developed **automated test probes** for services across the team, successfully identifying issues in legacy services
- Crafted password validators in **Django**, ensuring compliance with password security requirements.

Odoo Inc

Jun 2023 - Aug 2023

*Full Stack Engineer Intern, CRM Product Team*

- Integrated **ChatGPT** into Odoo CRM system, a framework empowered by **Python**, **PostgreSQL** and **Javascript**.
- Optimized customer service pipeline by enabling ChatGPT to categorize and tag incoming help tickets, leading to a **20%** increase in the number of tickets resolved per day.
- Improved tagging accuracy from 67% to **89.5%** through prompt engineering and developed a data pipeline that automatically updates knowledge and keeps prompts up-to-date.

## PROJECTS

Bustub Database Engine

Jan 2024 - May 2024

- Developed a Linux-based database engine that supports **SQL** queries and window functions in **C++**.
- Crafted B+ tree indexing and query optimizer to improve lookup throughput, achieving **top 1%** performance in class leaderboard.
- Engineered a conditional variable optimized buffer pool manager, enabling concurrent page fetching.
- Implemented **Multi-Version Concurrency Control** Executors to ensure data integrity and reliability.

Distributed File System

Mar 2023 - Apr 2023

- Designed and developed a Linux-based distributed file system using **Java** and **C** from scratch.
- Crafted on-demand **Least Recently Used caching** mechanism, reducing storage space usage by up to **90%** and outperforming popular solutions like Dropbox.
- Implemented **two-phase commit** protocol to ensure data consistency and utilized **log-based recovery** to enhance reliability and fault tolerance,

Protigue Eats

May 2022 - Aug 2022

- Developed an online food ordering web application, featuring a **RESTful web service** with a backend server built in **Java** and **Spring Boot**.
- Improved development efficiency with **MyBatis-Plus** and reduced loading time by 83% with **Redis**.

## SKILLS

**Programming Languages:** Java, Python, C++, Go, SQL, JavaScript, TypeScript, React.js, Vue.js, HTML, CSS

**Tools:** Django, Spring Boot, Kafka, Memcached, Redis, AWS, GCP, PostgreSQL, Nginx, gRPC, Git, Linux, Docker