

Benny(Xinhao) Jiang

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EDUCATION

University of California, Berkeley

Majors: Computer Science, Data Science

Aug 2017 - May 2021

- GPA: 3.92/4.00

- Relevant Courses: Data Structures, Advanced Algorithms and Intractable Problems, Operating Systems and System Programming, Database Systems, Internet Architecture and Protocols, Computer Security, Machine Learning, Principles and Techniques of Data Science, Probability Theory, Linear Algebra.

SKILLS

Programming Languages:

- Proficient: Python(Anaconda), Java, SQL, Objective C
- Familiar: Swift(iOS development), Go, Ruby on Rails, HTML, CSS

Tools & Technologies: MongoDB, MySQL, PostgreSQL, Firebase, Xcode, Jupyter Notebook

PROFESSIONAL EXPERIENCE

BizSeer.com, Software Engineering Intern, Beijing

May 2019-Aug 2019

BizSeer(www.bizseer.com), building the world's leading AI operations: *Intelligent Operations for the digital world.*

- Implemented a framework to diagnose the root causes of straggler SQL queries in large scale cloud databases.
- Co-authored a VLDB 2020(top conference in databases) accepted paper on diagnosing intermittent slow queries.
- Developed a real-time anomaly detector that identified and categorized KPI anomalies with over 97 F1 scores.
- Improved efficiency of algorithm experiments by leveraging MongoDB and multithread computing in Python.

UPE@Berkeley, Web Developer, Berkeley, CA

Aug 2018 - Dec 2018

Upsilon Pi Epsilon(upe.berkeley.edu): *Computer Science Honor Society of UC Berkeley*

- Redesigned the schema and implemented relational MySQL databases for new features.
- Revamped UI and developed 8 new front-end modules using Javascript, and modified the layouts with HTML.

UC Berkeley, EECS Department, Academic Intern, Berkeley, CA

Jan 2018 - May 2018

- Taught Java and Algorithms concepts to ensure maximum learning of over 25 students in my lab section.
- Reviewed students' codes in projects, and guided them through coding assignments.

PROJECTS

Pintos

Pintos is a simple instructional operating system framework for the x86 instruction set architecture.

- Implemented Pintos that supports kernel threads, kernel mode syscalls and loading and running user programs.
- Designed and integrate a Priority Scheduler that supports priority donation to prevent priority inversion.
- Implemented Fast File System including buffer cache in memory for faster accesses to files.

Database Management System

- Built a fully functional database that performs on virtual machine both simple and nested or correlated queries optimally.
- Implemented persistent B+ Trees as index system that maintains sorted data and allows quick insertion and deletion.
- Applied Selinger optimizer to compute the query results given the sizes and clusters of datasets involved.
- Implemented Strict 2-Phase-Locking for transaction concurrency and Write-Ahead Logging for system recovery

Job Tracker (iOS)

An iOS app that help people track important actions in the process of job hunting.

- Designed User Interaction and User Interface with Figma, and front-end with Xcode workspace.
- Used Firebase Database to store data and CocoaPods for package management.

End-to-End Encrypted File Sharing System

A file sharing system where clients can store and share files, secured with cryptography.

- Designed a file encryption scheme and secure the confidentiality and integrity of files.
- Implement secure sharing features with block cipher and symmetric key management.

ACTIVITIES

Vice President of Technology

Chinese People Union@Berkeley

May 2018 - May 2019

CPU@Berkeley is one of the most influential Asian Cultural Club in Bay Area.

- Led 4 project-based teams on software development, filming, and photography.
- Developed the official website and an application that connects local Asian businesses, using Ruby on Rails.