Wilson Xu

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Education

University of California, Berkeley   **December 2023**
Major: Computer Science   **GPA: 3.6**
- *Courses*: Operating Systems | Algorithms | Data Structures | Database Systems | Computer Security | Machine Learning | Artificial Intelligence | Computer Architecture | Discrete Math and Probability | Linear Algebra and Differential Equations

Technical Skills

- Python, Java, SQL, C, Golang, HTML/CSS, Javascript, Rust, React, RISC-V
- Git, Gitlab, Linux, Perforce, Jupyter, MongoDB, Postman, Agile, Makefile

Work Experience

Five9   **May 2023 - August 2023**
Software Engineer Intern
- Developed new full stack feature to display media types of streams for customers by expanding backend API and leveraging React; incorporated feature flag to personalize experiences for different customers
- Led initiative to standardize 10+ error exception classes of VoiceStream Spring Statemachine app into one unified class in Java, allowing teams worldwide to deploy quicker API updates via the development platform for enhanced customer experiences

Intel   **June 2022 - September 2022**
Software Engineer Intern
- Optimized device database management in FPGA design software platform with Python program, retrieved and processed millions of customer design properties from internal databases to improve data storage efficiency
- Wrote Python program to generate large-scale, multi-layer FPGA designs, supporting user-specified parameters in JSON, for performance testing of internal device databases

Projects

End-to-End Encrypted File Sharing System   **2023**
- Built file system in Go with data sharing across concurrent users with multiple devices
- Utilized RSA, symmetric-key cryptography, HMACs to uphold IND-CPA confidentiality and EU-CPA integrity for file invitations and select file storage features within a Datastore

Pintos Operating System   **2023**
- Designed and implemented an operating system in C with a team
- Supported fundamental operations such as process executions, forking, system calls, variable data sizes, priority scheduling, and memory management

Handwritten Digit Classification w/ Machine Learning   **2022**
- Produced a handwritten digit classification neural network that classifies whether numbers from the MNIST dataset are "3" or "9" with 98% accuracy
- Developed back-propagation/gradient descent formula for model from scratch, performed matrix computations with Numpy and visualized train/test progress with Matplotlib

Caltask: Web Development Productivity Tool   **2022**
- Created a workload and assignment manager with HTML/CSS and JS w/ team of three
- Added the ability to add, edit, and remove assignments from a weekly to-do list

Gitlet: Version Control   **2021**
- Designed and produced a version control system emulating Git, with Java
- Supported commands such as add, commit, merge, checkout with custom data storage classes and utilized data structures for efficient file tracking