Wesley Weisenberger

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EDUCATION

University of California, Berkeley **Expected Graduation:** May 2024
Bachelor of Arts in Computer Science, Minor in Data Science **GPA:** 3.7

Relevant Coursework: Structure and Interpretation of Computer Programs, Data Structures, Computer Architecture, Discrete Math and Probability Theory, Designing Information Devices and Systems I & II, Database Systems, Computer Security, Foundations of Data Science, Principles and Techniques of Data Science, Human Contexts and Ethics of Data, Advanced Linux System Administration, Calculus I & II

WORK EXPERIENCE

Undergraduate Research Apprentice Program August 2022 – Present
Data Science Student Researcher

- Researching under Professor Johnathan Marshall in the UC Berkeley Legal Studies Department.
- Using text data mining to understand patterns and changes in 18th-19th Century criminal law.
- Constructing RegEx classifiers to impute class on 16,000+ Old Bailey Online corpus criminal cases.

UC Berkeley Division of Computing, Data Science, and Society August 2021 – May 2022
Data 8 (Data Science Foundations) Academic Intern

- Assisted 30+ students in weekly labs with debugging and reinforcing programming concepts.
- Prepared and presented enrichment material for students to guide development in mastering data science problems.
- Topics included regression, classification algorithms, probabilistic distributions, SQL, and sampling methods.

PROJECTS

RookieDB – Java Spring 2023

- Fully fledged database management system capable of parsing complex SQL queries efficiently from a command-line interface, implemented using B+ trees to enable tailored data storage schemas to minimize IO costs.
- Supports multigranular concurrent execution control and database recovery.
- Query Optimizer to intelligently develop query plans and choose query execution paths, disk accesses, and join methods to optimize performance.

Discord Bot – Python Spring 2022

- Enabled users to query images from an aggregated search engine, then manipulate, rasterize, or edit said images through text commands and macros.
- Self-hosted docker environment facilitated error-handling and networking between Python container, search engine, and Linux system used for processing images.

Gitlet – Java Fall 2021

- Custom version control system modeled with functionality modeled after Git.
- Supports file tracking, branching, merging, and remote repositories.
- Implemented custom data structures to enable constant-time file lookup, hashing to handle "diffs" and to prevent file collisions, and merge conflict handling.

Weather Station – C, HTML, Javascript Spring 2021

- Designed a custom battery-powered Arduino weather monitoring circuit system which pushed data to a database on a locally hosted Linux web server, accessible to the internet.
- Self-hosted website to display and visualize weather data and give users the ability to pull more recent weather measurements from the device.

TECHNICAL SKILLS

Languages: Python, Java, C, Golang, SQL, HTML, CSS, Javascript, PHP, Swift, RISC-V Assembly
Tools: Git, NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, Docker, LaTeX, Linux, MongoDB, RegEx, XArray