Darren Wang

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Education

University of California, Berkeley   *August 2021 – May 2025*

B.A. in Computer Science | Minor in Data Science | Minor in Japanese   **GPA: 3.760**

Courses: Artificial Intelligence, Machine Learning, Operating Systems, Computer Graphics, Efficient Algorithms, Data Structures, Database, Machine Structures, Probability and Statistics, Advanced Japanese, Japanese Linguistics, Reading Taiwan

Skill: Python, Java, R, C, C++, TypeScript, React.js, Rust, Pandas, SQL, MATLab, LaTeX, LabView, Git, R Studio, Pine Script, RegEx, Jupyter Notebook, HTML, CSS, N-Quad, RDF, Microsoft Office, Premier Pro, Mandarin(Native), Japanese(Business)

Professional Experience

Otterz.co | AI/Software Engineer Intern   *July 2023 – August 2024*

● Designed and implemented an ontology in N-Quad format for mapping corporate tax forms using GPT-4o and Gemini, leveraging RDF for scalable data representation. Conducted in-depth research on IRS regulations, creating semantic rules for accurate filing requirements and enhancing data management efficiency through detailed technical documentation. Prompt speeded up for 25% and more accuracy on multiple URL condition when multiple tax forms are mentioned.

● Developed API structures using Uvicorn (FastAPI) to interface with Intuit Quickbooks, incorporating OAuth 2.0, validated the functionality using Postman, extracting user data, and integrating into MongoDB database. Secured the code with .env file.

Accenture | Smart Operations Intern   *June 2023 – July 2023*

● Collaborated with car sales companies in China to manage their tax files, including invoices and the ERP systems. Identified a matching issue between paperback files and electronic entries, reported proactively, and developed streamlined instructions. Reduced intern training period from 5 to 3 days, improving efficiency and cost-effectiveness.

CalCourse | Software Engineer   *October 2022 – November 2023*

● A WeChat API-based chatroom creator and finder connecting 3,000+ UC Berkeley students with the same classes.

● Receive data from the backend on AWS and pre-process them into QR Codes, rebuild the Dashboard from HTML into TypeScript React with Ant Design and QRCode.react packages, and redesigned the interaction of QR Codes from hover to touch for mobile browsers. Tested for Desktop and Mobile pages. Made the website more modularized for business expansion.

Projects

PintOS   *January 2024 – May 2024*

● An operating system for x86 architecture. Collaborated with 3 members of diverse backgrounds.

● Strengthened support for multithreading, user program loading and execution, and file system operations within the Pintos framework on Docker. Utilized system simulators including Bochs2 and QEMU3 to test the operating system while ensuring compatibility with x86 CPU and peripheral devices. Led regular meetings, discussions, troubleshot issues, and allocate tasks.

Gitlet   *January 2022 – May 2022*

● Built a simplified version control system that mimics Git functionalities like commits, branching, and file persistence.

● Using Java to implement core functionalities like commit tracking, branching, and file persistence. Utilized data structures such as hash maps and linked lists for efficient storage and retrieval of version history, ensuring optimal performance. Conducted unit and integration testing to validate functionality, while managing file I/O for persistent data storage.

Spam and Ham   *January 2022 – May 2022*

● A machine learning classifier to differentiate between spam & non-spam emails using Natural Language Processing techniques.

● Extracted and processed email text data to create meaningful features for model training. Implemented various machine learning algorithms, including logistic regression and Naive Bayes, to achieve high classification accuracy. Evaluated model performance using cross-validation and optimized hyperparameters to enhance predictive reliability.

Activities

Meteor Drive, Director of Public Relations and Member of the Executives

● A newly founded student club promoting startup ideation, proposal validation, and VC connections in Berkeley.

● Successfully built up the structure of the club; hosted the Pitch Night event and gathered 50+ attendees for 5 start-up teams.