RIDGE HUANG

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Education

University of California, Berkeley **Aug. 2022 - May 2026**
Bachelor of Arts in Data Science *Berkeley, CA*

Relevant Coursework

Efficient Algorithms, Structure and Interpretation of Computer Programs, Algorithms, Discrete Mathematics & Probability, Data Structures, Linear Algebra & Differential Equations, Principles & Techniques of Data Science, Foundations of Data Science, Intractable Problems, Teaching Techniques for Computer Science

Experience

Gitty AI **Feb 2024 – May 2024**
Software Engineering Intern | TypeScript, AWS Lambda, AWS DynamoDB, AWS SDK, Next.js *Remote*
- Deployed reliable, cloud-based authentication system using NextAuth integrated with Google OAuth, leveraging AWS to efficiently manage token storage and authenticate 4000+ daily users, while optimizing future scalability costs.
- Managed user data with AWS Lambda and DynamoDB, scaling to 5000+ daily requests by leveraging AWS SDK.
- Configured Lambda functions for real-time data processing and synchronization, reducing data retrieval times over 60%.
- Worked in an Agile environment to accelerate MVP delivery within 3 months, scaling the product to 1000+ daily users.

UC Berkeley EECS Department **June 2024 – Aug 2024**
Teaching Assistant | Data Structures and Algorithms *Berkeley, CA*
- Carefully designed and delivered lectures to daily 2-hour lab sessions, weekly 1-hour discussion sections to 50+ students, achieving a 4.6/5 star teaching satisfactory–a high distinction recognizing exemplary teaching, leadership and creativity.
- Mentored students in office hours, lecture and lab with fundamental concepts surrounding data structures & algorithms.
- Collaborated with staff to carefully design and test original material to gauge mastery of core concepts for use in exams, labs, and homeworks through rigorous QA processes, ensuring optimal learning experience for over 500 students.

Web Development at Berkeley **Sep 2023 – Present**
Software Engineer | JavaScript, MongoDB, Mongoose, Express.js, Node.js, Postman *Berkeley, CA*
- Designed and deployed REST API endpoints using Mongoose and javascript, with POST and GET endpoint for user registration, retrieving user data, and efficient score calculations for mock husband-calling contest website.
- Using Express.js, optimized response times by 40% through efficient JSON parsing and async database operations.
- Reduced average error resolution time by over 70% using relevant status codes and testing deployment with Postman.
- Led interactive lectures for 200+ students in UC Berkeley's premier Full-Stack course, boosting course ratings over 20%.

Projects

Gitlet Version Control System | *Java, Git, Hashing, Linked Lists, Trees, Serialization*
- Designed version control system based on Git, employing trees and cryptographic hash functions to manage and uniquely identify commits by log message and timestamp, allowing for restoration to previous states via serialized file operations.
- Developed a command-line interface enabling dynamic interaction with the version control system, supporting branch creation and management, resolving merge conflicts via concatenation, and offering view of the entire backup history.

UFA Web Scraper and Modeling | *Python, Jupyter, Data Science, Machine Learning, scikit-learn, pandas, requests*
- Engineered an autonomous web scraper to collect player stats from the UFA website using REST API requests.
- Integrated data handling with Pandas for data storage, extracting datasets in CSV format for EDA use in Jupyter.
- Developed a classification model using multinomial logistic regression via scikit-learn to classify UFA players.
- Feature engineered with heatmaps, PCA, and correlation analysis in Jupyter, achieving training accuracy >90%.

2D Tile-Based World Exploration Engine | *Java, Git, OOP, JUnit*
- Created dynamic, maze-like worlds using OOP and procedurally random generation with recursive space partitioning.
- Managed world elements such as collectible items, toggling vision, and replayability with arraylists and matrices.
- Designed a responsive UI with a real-time heads-up display for game stats, featuring keyboard shortcuts for quitting, replaying, toggling music, and seeding new worlds by integrating StdDraw libary.

Technical Skills

Languages: Python, Java, HTML/CSS, JavaScript, SQL, TypeScript, Scheme
Libraries/Frameworks/Cloud/Tools: MongoDB, Express.js, React.js, Node.js, Next.js, AWS Lambda, AWS DynamoDB, AWS-SDK, scikit-learn, pandas, matplotlib, seaborn, Git, Jupyter, Figma, MySQL, PostgreSQL