Winbert Zhang

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EDUCATION

University of California, Santa Barbara   Expected Graduation June 2025
B.S. in Computer Science   *GPA: 3.87/4.00*
Relevant Coursework: Software Systems, Algorithms and Data Structures, Machine Learning, Computer Architecture, Discrete Math, Linear Algebra, Multivariable Calculus, Probability and Statistics
Awards: Regents Scholarship, Dean's Engineering Honors

EXPERIENCE

Application Developer Intern   June 2023 – Present
UCSB Health and Wellness Department   *Santa Barbara*
- Engineered Flask-based web application for office supply management involving over 100 items and equipment
- Established robust SQLAlchemy and PostgresSQL database model encompassing multiple tables and columns
- Developed cohesive email alert system hosted on Heroku and implemented using Requests and SendGrid API, facilitating automatic email notifications when stock inventory drops below defined thresholds.
- Implemented secure user authentication through Google OAuth to manage the sign-in process for 20 admins

Software Engineering Intern   Jun 2022 – Sept 2022
X-Camp Academy   *Remote*
- Designed and implemented robust backend APIs using the Spring framework and mySQL, resulting in a significant 20ms improvement in average query efficiency, enhancing system responsiveness and reducing user wait times.
- Developed a Vue.js and Java-based Learning Management System for 100 students, 30 teachers, and 3 admins.
- Automated unit and integration testing to reduce codebase errors by 15% and ensure consistent code quality.
- Successfully imported 1000+ student records into database with Python and SQL scripts, ensuring data reliability.
- Leveraged Agile scrum methodology to drive rapid development and cultivate collaboration among team members.

CS Undergraduate Learning Assistant   Sept 2022 – Present
University of California, Santa Barbara   *UCSB*
- Mentored and assisted over 300 undergraduate Computer Science students across 4 quarters by conducting weekly one-on-one debugging sessions and providing essential support through office hours.
- Offered personalized guidance to help students debug code and understand C++ and Python concepts.
- Engaged students through targeted questions and diagrams to identify key ideas and encourage learning.
- Employed strong verbal and written communication skills with professors and TAs to facilitate class smoothly.

PROJECTS

GauchoCourses | *Java, Maven, Spring Boot, Vue, Node, AWS, MongoDB, Git*   Sept 2023
- Project Manager for UCSB course planner application, developing and reviewing code for 15 new features
- Promoted application launch to campus-wide audience, receiving 1000+ users within the first week
- Conducted training sessions for 12 developers and provided hands-on practice with project technologies
- Optimized deployment using AWS EC2 and MongoDB, resulting in a 20% reduce in cloud computing costs

Human Development Index | *Python, Numpy, Pandas, Altair, Matplotlib, Seaborn, Scikit-Learn*   Sept 2023
- Leveraged data from multiple datasets on the OurWorldInData website, encompassing over 100,000 rows and various columns, to conduct a comprehensive analysis of variables to predict human development index.
- Executed data pre-processing by locating missing values and removing approximately 500 rows of incomplete data.
- Developed linear regression model and attained strong performance from MAE, RMSE, and an R^2 of 85%
- Conducted a comprehensive model comparison, evaluating various regression models, including Linear Regression, Ridge, Lasso, Random Forest, Gradient Boosting, and Support Vector Regressor, in terms of R-squared and RMSE

SKILLS

Languages: Java, Python, C, C++, SQL, JavaScript, HTML, CSS, TypeScript
Frameworks: React, Vue, Node, Express, Flask, AWS, Azure, Heroku, Spring, Tailwind, PyTorch, Docker, MongoDB
Developer Tools: Git, VS Code, Visual Studio, IntelliJ, Eclipse, Postman, MySQL, Apache Maven, Slack
Extracurricular Leadership: UCSB Data Science Club Finance Director, UCSB Theta Tau Recruitment Head, UCSB Taiwanese American Student Association Treasurer