Winbert Zhang

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EDUCATION

University of California, Santa Barbara — Expected Graduation June 2025
B.S. in Computer Science — *GPA: 3.86/4.00*
Relevant Coursework: Software Engineering, Machine Learning, Algorithms and Data Structures, Object Oriented Programming, Computer Architecture, Networking, Databases, Linear Algebra, Calculus, Probability and Statistics

EXPERIENCE

Software Engineer Intern — June 2024 – Present
Vitu — *Agoura Hills, CA*
- Developed Generative AI document processing pipeline for 600,000 PDFs monthly to reduce auditing time by 50%
- Achieved 99.7% document verification accuracy by researching and testing different advanced ML approaches
- Automated data processing using Python cloud functions, improving scalability for user-submitted documents.
- Developed internal API in C# to extract key-value pairs from PDF documents and enhance operational efficiency

Website Developer Intern — June 2023 – Present
UCSB Health and Wellness Department — *Santa Barbara, CA*
- Developed app for managing over 100 supply items and equipment, streamlining inventory management for staff.
- Designed PostgreSQL database with multi-table schemas, enabling efficient data organization and retrieval.
- Built automated email alerts using Python and SendGrid API, deployed via Heroku for inventory updates.
- Implemented Google OAuth for secure user authentication, managing admin and user sign-in processes effectively.

Software Developer Intern — June 2022 – Sept 2022
X-Camp Academy — *Remote*
- Developed features for Learning Management System, supporting around 100 students, 30 teachers, and 10 admins
- Designed REST API endpoints using Java Spring framework for CRUD operations on the MySQL database
- Updated codebase with automated tests to ensure 100% code coverage for unit, integration, and end-to-end tests.
- Imported 1000+ student records into database using Python and SQL scripts, performing data validation.

PROJECTS

Smart Split | *Next.js, React, Typescript, Firebase, Generative AI* — Sept 2024
- Developed receipt expense tracking and splitting web application to convert receipt images into structured JSON data, enabling automated bill splitting for college students and reducing manual expense tracking by 80%
- Integrated Google Generative AI (Gemini 1.5 model) API for efficient extraction and classification of receipt items
- Managed Firebase backend to handle user authentication, real-time databse updates, and secure data storage

Human Development Index | *Python, Numpy, Pandas, Altair, Matplotlib, Seaborn, Scikit-Learn* — Sept 2023
- Analyzed 100,000+ rows of data from the OurWorldInData website to predict the human development index.
- Executed data preprocessing by identifying missing values and removing 500+ rows of incomplete data.
- Built a linear regression model with strong performance metrics: MAE, RMSE, and R^2 of 85%.
- Compared various regression models, including Ridge, Lasso, Random Forest, and Gradient Boosting.
- Identified key factors driving HDI disparities across countries, offering actionable insights for policymakers.

GauchoCourses | *Java, Maven, Spring Boot, Vue, Node, AWS, MongoDB, Git* — Nov 2022
- Developed UCSB course planner app and launched to campus-wide audience, receiving 1000+ users
- Connected Spring Boot backend to UCSB Gold API to retrieve and display data for 3000+ courses
- Streamlined deployment on AWS EC2 and MongoDB, reducing cloud infrastructure costs by 20%.

SKILLS

Languages: Java, Python, C++, C#, SQL, JavaScript (ES6+), HTML, CSS, TypeScript
Frameworks: Next.js, Vue.js, Spring Boot, .NET, Flask, Express.js, Tailwind, PyTorch, Docker
Cloud & Databases: AWS, GCP, PostgreSQL, MySQL, MongoDB, Firebase
Leadership: Co-President of UCSB TASA, Treasurer for UCSB Data Science Club, Active Member of UCSB Theta Tau