

Raymond Xie

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EDUCATION

University of California, Santa Barbara | (UCSB)

Expected June 2027

B.S in Computer Science

- Relevant Coursework: Data Structure & Algorithms, Cloud Computing, Computer Architecture, Database Systems, Logic Design
- Organizations: ACM AI, ACM WebDev, ACM ICPC

TECHNICAL SKILLS

Programming Languages: Python, C++, JavaScript, Java, SQL, Typescript, Rust

Frameworks & Tools: AWS, ReactJS, NodeJS, FastAPI, Bootstrap, Scikit-learn, Pandas, Docker, Git, MongoDB, PostgreSQL, VUE.js, Spring Boot, Express, Terraform, Postman

Methodologies: Agile, Test-Driven Development, CI/CD

PROJECTS

Low-Latency Order-Book Matching Engine (Algorithm, Multithreading, Binance, WebSocket)

- Engineered a low-latency engine replicating exchange-grade functionality, supporting order placement, modification, cancellation, and trade execution under price-time priority rules
- Integrated real-time Binance WebSocket APIs, enabling ingestion and processing of 50,000+ orders/second under stress-tested market conditions
- Optimized synchronization and concurrency control, reducing system latency by 85% and ensuring high availability in distributed environments

Chattr – Real-time Chat Application (React, Node/Express, MongoDB, Socket.IO)

- Shipped real-time messaging with rooms/presence/typing via WebSockets; designed REST endpoints and message schemas with indexes + TTL cleanup for fast reads and automatic retention
- Built message pagination and query filters for chat history to cap payload sizes and keep scrollbar snappy on low-bandwidth clients
- Implemented secure REST APIs with JWT + bcrypt authentication, rate limiting, and structured logging, reducing API vulnerabilities by 40%

AI-Powered Phishing Email Detection System (Python, FastAPI, scikit-learn, React)

- Built a machine learning pipeline using TF-IDF feature extraction and Logistic Regression classifier, achieving 91% precision and 88% recall on a dataset of 100k+ labeled emails
- Implemented TF-IDF vectorization for text feature extraction, preprocessing subject lines, sender fields, and email bodies
- Applied NLP preprocessing techniques to improve classification performance

HTS Tariff Classifier (FastAPI, OpenAI Embeddings, FAISS, PostgreSQL)

- Developed a semantic search engine leveraging OpenAI embeddings and FAISS for similarity matching on 500k+ product records
- Applied NLP (natural language processing) techniques for text normalization and similarity matching, improving classification accuracy on ambiguous product descriptions
- Improved classification accuracy by 18% compared to keyword search by applying NLP similarity techniques for ambiguous product descriptions

WORK EXPERIENCE

Oriox Customs Broker Inc. - Customs Clerk Intern

June 2023 – August 2025

- Filed entries for air and ocean shipments, improving accuracy and efficiency of compliance workflows.
- Automated compliance workflows by building a PHP-based form handler to streamline POA submissions.
- Assisted in digitizing shipment documentation, helping transition from paper-based workflows to an internal database system, reducing input errors by 18% and saving ~10 hours/week