JIVAJ BRAR

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Education

University of California, Santa Cruz
Santa Cruz, CA
BS Computer Science | BA Business Management Economics
September 2022 - June 2026

- Coursework (CS): Machine Learning, Applied ML, Artificial Intelligence, Computational Models, Computer Systems, Assembly Language, Data Structures and Algorithms, Distributed Systems, Natural Language Processing
- Coursework (BME): Accounting, Econometrics, Macroeconomics, Microeconomics, Business Strategy, Stock Market, International Financial Markets, Statistics for Economics

Relevant Experience

When2Surf
Santa Cruz, CA
Founding Software Engineer
October 2025 - Present

- Architected and deployed an AWS-based full-stack platform that processes hourly marine forecast data, analyzes user-defined preferences, and automatically schedules optimal surf sessions to Google Calendar.
- Implemented JWT authentication, OAuth 2.0 Google Calendar integrations, and persistent user data storage; deployed the frontend on Vercel.
- Co-inventor on a patent-pending system for automated surf condition analysis and scheduling.

Cauris Finance
San Francisco, CA
Front-end Software Engineer Intern
Jan 2025 - March 2025

- Rebuilt the frontend from a minimal prototype into a production-ready, mobile-responsive React application for an AI-powered credit risk and reporting platform.
- Integrated asynchronous REST APIs to render credit risk scores and detailed credit reports, implementing dynamic, state-driven UI updates.
- Designed intuitive workflows to present complex financial risk assessments clearly across desktop and mobile.

Projects

FraudSense *Fraud Scoring System*

- Built and deployed a Dockerized real-time fraud scoring API (FastAPI, PostgreSQL, Redis) with online behavioral feature enrichment (velocity, device, merchant signals) and rule-based decisioning.
- Trained and integrated a fraud classifier on a 250K-row dataset, achieving ROC-AUC 0.941 and calibrating decision thresholds under heavy class imbalance.
- Load-tested the live service with 10,000 transactions, sustaining 233 req/s at p95 latency of 6.33 ms.

Inlyne *Real-Time Collaborative Documentation Platform*

- Developed frontend features for a real-time collaborative markdown platform, integrating with a Java (Spring Boot) backend via REST and WebSocket/STOMP messaging.
- Implemented client-side state management to support live document updates and concurrent editing workflows across multiple users.
- Diagnosed and resolved synchronization issues between frontend and backend services during active feature development.

Papermaker *Algorithmic Trading Bot*

- Designed a sentiment-driven trading strategy using VADER and Reddit/X APIs to generate market signals.
- Integrated with QuantConnect to simulate automated trade execution in Python.
- Backtested strategy yielding 28% annualized return in simulation, exceeding benchmark performance.

SKILLS

Technical Languages: Python, C/C++, Java, JavaScript, TypeScript
Backend & Systems: FastAPI, Spring Boot, PostgreSQL, Redis, REST APIs, WebSockets
Cloud & DevOps: Docker, AWS (EC2, S3, EKS, Lambda, ECR, CloudWatch), CI/CD
Applied ML: Tensorflow, OpenCV, Pytorch
Languages: English (native), Punjabi (native)