

# Ernest Zachary Aditya

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## Professional Experience

**Aetherum.ai** – Full-Stack Engineer | San Francisco, CA April 2025 - December 2025

- Partnered with the CTO to architect the loan underwriting agent that autonomously evaluates risk and executes optimized loan agreements for a diverse user base.
- Designed and implemented financial models to assess user creditworthiness significantly reducing platform risk exposure to cryptocurrency market volatility.
- Built an internal web app for scenario testing and validation of underwriting models, improving iteration speed and enabling faster, safer production releases.
- Built React dashboards for real-time portfolio tracking, achieving 100% beta onboarding and high user retention through iterative UI updates.

**Spero Studios** - Research Assistant | San Francisco, CA October 2022 – December 2022

- Analyzed 20+ top-performing arcade games using Google Trends and Twitch Tracker to identify SEA market trends.
- Proposed data-backed game aesthetics that helped the team place 3rd out of 100+ competitors at the Polygon Development Hackathon.

**Diablo Valley College Math Faculty** – Tutor and Teaching Assistant | Pleasant Hill, CA September 2022 - May 2023

- Tutored 10–20 students weekly on topics ranging from precalculus to linear algebra and differential equations.
- Clarified complex mathematical logic (Linear Algebra, Differential Equations) for classes of 30+ students, a skill applied daily in documenting technical system architectures.

**Bercerita**– Teaching Intern | Pleasant Hill, CA September 2022 - May 2023

- Taught English to a class of 10 Indonesian students from underprivileged rural neighborhoods via Zoom, improving language proficiency and confidence in communication.

## Personal Projects

**Full Stack E-Commerce AI** January 2026

- Built a full-stack search-to-checkout pipeline with a catalog-grounded AI assistant.
- Implemented structured JSON outputs for AI-driven product discovery to ensure reliable state transitions between search, cart, and [Payment/Checkout] modules.

**Spotify Playlist Recommender** March 2025

- Engineered an ML-driven playlist builder using similarity-based ranking to deliver real-time, context-aware track recommendations.

**S&P 500 Predictor** November 2024

- Developed a machine learning model using a Random Forest Classifier to predict S&P 500 stock price movements.
- Achieved a testing precision score of 67% by engineering key financial features and optimizing hyperparameters.

## Skills

- **Programming:** Python, Typescript, HTML, CSS, JavaScript, SQL, R, Java, C++, Kotlin, Solidity
- **Data Science:** TensorFlow, Scikit-Learn, PyTorch, Seaborn, Matplotlib, Pandas, Microsoft Excel,
- **Frameworks / Tools:** NextJS, FastAPI, Vite, React Native, Vercel, AWS, Git, Flask, Ollama, OpenAI, Anthropic

## Education

**University of California, Berkeley** August 2025

- Bachelor of Arts in Data Science | GPA: 3.4

**Diablo Valley College (DVC)** May 2023

- Applied Mathematics | GPA: 3.9

## Extracurricular Activities

**DVC Blockchain** – Vice President and Co-Founding Officer | Pleasant Hill, CA September 2022 - May 2023

- Co-founded and led a blockchain-focused student organization with ten main team members, growing a community to 200+ followers through strategic social media campaigns and outreach initiatives.
- Spearheaded the planning and execution of a workshop featuring a prominent blockchain startup founder, attracting and engaging over 80 attendees.
- Collaborated with a team to promote blockchain education, foster networking opportunities, and establish the organization as a hub for blockchain enthusiasts on campus.

**DVC Project Bracket** – Project Manager | Pleasant Hill, CA September 2022 - December 2022

- Directed a team of developers in designing and building an onboarding Android app for Contra Costa College students using Kotlin, enhancing the student onboarding experience.
- Facilitated weekly meetings to track progress, resolve challenges, and ensure timely delivery of project milestones.