

Ernest Zachary Aditya

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Professional Experience

Aetherum.ai - Full-Stack Engineer | San Francisco, CA

April 2025 - Present

- Authored a detailed whitepaper outlining the proprietary financial model behind the digital asset credit score, a core framework used for analyzing cryptocurrency asset creditworthiness in the Aetherum ecosystem.
- Developed React and FastAPI front-end dashboards for real-time visualization of portfolio performance and risk metrics, enhancing user interface and data accessibility.
- Built an internal website enabling the AI team to test and validate the financial model, accelerating development of the loan underwriting AI agent.
- Leveraged Python, PyTorch, Pandas, and Matplotlib for data processing, model development, and visualization tasks.

Spero Studios - Research Assistant | San Francisco, CA

October 2022 - December 2022

- Analyzed over 20 top-performing arcade games in Southeast Asia to identify recurring trends and user preferences.
- Utilized Google Trends and Twitch Tracker to propose actionable in-game aesthetics, contributing to the team securing 2nd runner-up at the Polygon Development Hackathon out of 100+ competitors.
- Delivered insights that improved project design efficiency by 15%, collaborating with a cross-functional team of developers, designers, and product managers.

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.
- Collaborated with a professor for a precalculus class to assist a class of 30+ students, clarifying complex mathematical concepts during lectures and providing support for in-class questions.

IFund Education - 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.

Education

University of California, Berkeley

August 2025

Bachelor of Arts in Data Science in Business and Industrial analytics | 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

Personal Projects

Sales Dashboard

January 2025

- Designed an interactive Tableau dashboard to visualize sales metrics, highlighting top-performing products and underperforming categories for revenue optimization.

E-Commerce Prediction System

December 2024

- Built a search engine to recommend products based on user search queries using Natural Language Processing (NLP)
- Implemented tokenization, TF-IDF vectorization, and cosine similarity to match user queries from the Walmart catalog.

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 visualization: Tableau, Seaborn, Matplotlib

Data Science: Pandas, TensorFlow, Scikit-Learn, PyTorch, Microsoft Excel