

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