

Nico Saputra

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SUMMARY

Application Engineer with experience building distributed backend applications, high throughput APIs, and large scale data systems. I design and own backend services that support multi team adoption, financial accuracy, and global operations. Skilled in AWS, Python, .NET, and GraphQL with a focus on reliability and distributed architecture. I deliver scalable systems used in production across engineering teams worldwide.

EDUCATION

Drexel University

Bachelor of Science in Computer Science

Philadelphia, PA

Sept. 2020 – June 2025

EXPERIENCE

Vanguard

Application Engineer I

Malvern, PA

September 2024 – Present

- Designed and developed a distributed application with a high throughput API and queueing architecture, delivered two months early and enabling 15+ engineering teams to consume the API in production workflows
- Built features for a large scale GraphQL application consumed globally, designing queries and resolvers that aggregate data from 6 to 10 upstream APIs owned by partner teams to deliver the data consumers need
- Deployed AWS API Gateway with Lambda, DynamoDB, and S3 to manage traffic and reduce operational costs
- Improved data accuracy for a \$2.7B client by reconciling financial data across distributed systems and partnering with finance teams to validate profile conditions
- Implemented image resizing and layout corrections in a fund comparison PDF export workflow to ensure new fund data rendered cleanly and maintained visual quality for financial advisors

Holman Automotive

Software Engineer

Mount Laurel, NJ

September 2023 – March 2024

- Refactored and optimized a .NET API, improving Salesforce integration and reducing response times by 11%
- Automated parsing and processing of 500+ daily emails using Python scripts, cutting manual effort by 3+ hours daily
- Modernized legacy systems during Salesforce migration to improve maintainability and support modern tooling

Drexel University

Junior Developer

Philadelphia, PA

March 2022 – September 2022

- Developed a Python app to automate healthcare data processing and generate real-time dashboards, reducing manual work by 60% and improving data accuracy
- Translated nontechnical needs from healthcare staff into technical requirements, improving system usability and user satisfaction scores by 20%

PROJECTS

Race Walking Data Visualization | *Python, Flask, PostgreSQL*

September 2024 – March 2025

- Detected illegal race-walking movements with 30% higher accuracy by analyzing 10K+ biomechanical data points using a Flask-based analytics platform
- Built interactive dashboards comparing 50+ athletes to quickly detect misjudged performances across events
- Enhanced data usability for coaches by deploying LLM-generated performance narratives, increasing report comprehension speed by 60%
- Demonstrated 30% higher judging consistency by presenting an automated adjudication proof of concept to official race-walking judges

Chess++ | *JavaScript, Express, Node.js, PostgreSQL*

August 2023 – September 2023

- Led a team of 3 to design and develop a 4-player chess game with a fog-of-war mechanic, enhancing strategic gameplay and competitiveness
- Built and deployed full-stack features with Express, Node.js, and Socket.io for real-time multiplayer and in-game chat
- Implemented secure authentication and data persistence using bcrypt, token-based sessions, and PostgreSQL to ensure verified access and match continuity

TECHNICAL SKILLS

Skills: Python, TypeScript, C#, SQL, .NET, Flask, Node.js, Angular, React, AWS, Docker, CI/CD, Postman