

Nicholas Irvin Suhendi

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Professional Summary

Data-driven and analytical professional with experience in machine learning, time series forecasting, and data engineering. Passionate about transforming data into insights and developing scalable backend systems that support intelligent decision-making.

Technical Skills

Programming Languages: Python, SQL, Typescript, Go, Java, C#, Solidity, Kotlin, PHP

Tools & Frameworks: TensorFlow, scikit-learn, Matplotlib, Streamlit, OpenCV, Gin, NestJS, Git, ASP.NET, Express.js, Node.js, Laravel

Technologies: Machine Learning, Deep Learning, MySQL, SQL Server, PostgreSQL, Docker, Firebase, Redis, Unity, Electron, GraphQL

Experience

AI Researcher

January 2024 – Present

Binus University

Jakarta, ID

- **Applied deep learning** and **time series modeling** (CNN, LSTM) to **forecast stock prices** for Top LQ45 financial companies, improving predictive accuracy and supporting data-driven investment insights.
- **Engineered data preprocessing pipelines** and **anomaly detection/handling** methods to optimize model performance and ensure data integrity in financial forecasting.
- **Authored two papers:** *Stock Price Forecasting Utilizing CNN and LSTM for Top 5 LQ45 Financial Companies* and *Improving Stock Price Prediction Utilizing Anomaly Detection and Handling for Top 3 LQ45 Financial Companies in Indonesia*

Software Engineer, Data

Jan 2024 – Present

Binus University

Jakarta, ID

- **Managed** and **maintained SQL Server databases**, performing health checks, data validation, and performance tuning to **ensure high reliability** and **integrity**.
- **Optimized SQL Agent jobs** and **automated maintenance tasks**, reducing execution time and improving overall system efficiency.
- **Developed** and **maintained a RESTful API using ASP.NET** to provide secure, reliable, and efficient data access across internal systems.
- **Acquired the Best Research Interest Group Award** for the Even Semester 2023/2024 in recognition of innovative and outstanding technical contributions.

Software Engineer, Backend

Aug 2025 – Present

Freelance

Jakarta, ID

- **Developed and maintained backend services** for a **hospital asset management system**, enabling efficient asset activation, utilization, installation, and notification workflows.
- **Built** and **optimized RESTful APIs** using NestJS and MySQL, ensuring secure, reliable, and scalable data operations.
- **Collaborated with stakeholders** to design and refine feature implementations, improving workflow efficiency and system usability.

Coding Instructor

Jan 2023 – Jan 2024

Binus University

Jakarta, ID

- **Guided 500+ undergraduates** in learning Deep Learning, Database Technologies (MySQL, SQL Server), Data Mining, Algorithms, and Data Structures.
- **Produced 5 software development projects** across different domains, including game development, desktop applications, web applications, mobile applications, and network systems.
- **Created** and **graded** story-driven **coding assignments** to improve student engagement and conceptual understanding.

Publications

- Unravelling Public Opinion on Climate Change: An English-Language Twitter Analysis Using LDA and Advanced Sentiment Classification Techniques** Published
Co-Author 2025
- Conducted sentiment analysis and topic modeling on 1,500 climate-related tweets using BERTweet, RoBERTa, and VADER, achieving highest F1-score of 0.84 with BERTweet.
 - Identified thematic patterns using BERTopic with coherence up to 0.78, revealing sentiment-driven public discourse on technology, policy, and skepticism.
- Stock Price Forecasting Utilizing CNN and LSTM for Top 5 LQ45 Financial Companies** Accepted
First Author 2025
- Accepted for presentation at ICAST2025 conference. Applied CNN and LSTM models for stock price forecasting of top LQ45 financial companies.
- Improving Stock Price Prediction Utilizing Anomaly Detection and Handling for Top 3 LQ45 Financial Companies in Indonesia** Under Review
First Author 2025
- Focused on data preprocessing and anomaly treatment to enhance predictive model performance for financial forecasting.

Projects

- Paddy Disease Classifier** Machine Learning Engineer
Data Science Python, TensorFlow, EfficientNet, Google Earth Engine
- Developed a deep learning model using EfficientNetB0 and EfficientNetB4 architectures to classify the top three most lethal paddy diseases from field imagery.
 - Retrieved NDVI index mapping from Google Satellite Data to detect crop stress and visualize potentially affected regions.
 - Aimed to reduce crop loss rates by enabling early disease identification and facilitating rapid response for farmers and agricultural agencies.
- OnlyArts** Backend & Smart Contract Engineer
Web3 Solidity, NestJs, Prisma, PostgreSQL, Vite
- Developed a Web3-powered application enabling artists to upload artwork, create NFT-based collections, and monetize them through smart contract-controlled paywalls.
 - Built and maintained APIs connecting the application to blockchain smart contracts, ensuring secure, reliable, and scalable data and transaction handling.
 - Designed and implemented smart contracts for NFT minting, payment processing, and NFT access tokens granting users permission to view paid art collections.
- Reef Rascals** Full-Stack Engineer
Web3 Motoko, Typescript, Vite, React Router
- Developed a Web3-based marketplace and gacha game where users can collect, trade, and battle unique NFT creatures called Rascals.
 - Implemented full-stack features and integrated blockchain smart contracts to handle NFT minting, ownership, and gameplay logic.
 - Achieved 3rd place at the Codefest Hackathon 2.0 for innovation and execution of this project.

Education

- Binus University (GPA 3.83)** Jakarta, ID
Bachelor's in Data Science

Achievements

- 3rd Place – Codefest Hackathon 2.0** 2024
- Created a blockchain-powered marketplace and gacha game featuring collectible NFT creatures.
- BINUS Appreciation Day Awardee** 2025
- Awarded for outstanding achievements, winning competitions, and bringing recognition to the university.