Derrick Vericho

UNDERGRADUATE DATA SCIENCE STUDENT

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ABOUT ME

I'm a 5th-semester undergraduate student with a strong passion for data science and artificial intelligence, particularly in building solutions that connect technology with real-world needs. My interest lies in combining data-driven insights with the financial industry, exploring how AI can create smarter and more impactful services. Through various projects, I have developed skills in data analysis, machine learning, and system development, while continuously seeking challenges that push me to grow.

EDUCATION

Binus University 2023 – present

Data Science, School of Computer Science, GPA: 3.57

Relevant Course: Deep Learning, Machine Learning, Model Deployment, Bayesian Data Analysis, Artificial Intelligence, Data Strucure, Algorithm Programming, Text Mining, Big Data & Infrastructure, Software Engineering, Database Technology

SKILL

- Programming & Tools: Python, SQL, Docker, Git, Node.js, Typescript, n8n
- ML & AI Frameworks: TensorFlow, PyTorch, scikit-learn, FastAPI, LangChain
- NLP & LLM: HuggingFace, Transformers, Prompt Engineering, RAG, VectorDB
- Databases: MySQL, PostgreSQL

PROJECTS

Finance AI Expert Chatbot

- Developed an AI-powered chatbot that provides personalized insights on stock analysis, crypto trends, and portfolio management.
- Built an interactive web app using Streamlit, integrating conversational AI models for real-time financial Q&A.
- Simplified complex financial concepts into user-friendly explanations, improving accessibility for students and beginner investors.
- Applied interdisciplinary skills in AI, finance, and UI/UX design to create a functional and engaging tool.

SPY Forecasting using LSTM

- Built and trained an LSTM-based deep learning model to forecast SPY ETF price movements using historical time series data.
- Designed complete pipeline: data collection, preprocessing, sequence generation, model training, and evaluation metrics.
- Achieved strong predictive performance with: MSE: 0.0013, RMSE: 0.0362, MAE: 0.0261, R^2 Score: 0.8729.

Obesity Level Prediction Web App

- Built a machine learning web app to predict obesity levels based on lifestyle & habit data
- Compared Random Forest vs. XGBoost models for classification, selected Random Forest due to higher test accuracy (94.31% vs. 91.94%) and strong generalization.
- Designed intuitive UI/UX to communicate predictions and probabilities integrated with FastAPI as backend

CERTIFICATION

IBM Data Science

- Developed full data science pipeline (data wrangling, modeling, deployment) using Python, SQL, Jupyter & Watson Studio
- Executed real-world projects: house price regression, loan default classification, cross-platform flight reliability dashboard
- Built expertise in ML algorithms (regression, tree-based, clustering), deep learning & generative AI

NVIDIA Fundamentals of Deep Learning

- Trained CNNs for image classification/object detection, leveraging GPU acceleration and model optimization
- Applied data augmentation & hyperparameter tuning to improve model robustness
- Employed transfer learning to accelerate development using pretrained architectures
- Deployed end-to-end computer vision solutions, including final project (e.g. fresh vs rotten fruit classification)

ACTIVITIES

Activist Data Science Club: Research Division

- Second author & Corresponding author on published paper "Vision Transformer and CNNs in Kidney Stone Classification: A Comparative Study" acceptance on ICCSCI