NGUYEN HAI DANG

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WORKING EXPERIENCE

AI Research Intern | University of Information Technology (VNU-HCM) | Jul 2025 – Dec 2025

- Implemented and experimented with Explainable AI (XAI) methods, including LIME, SHAP, and Integrated Gradients (IG), GNNExp, to interpret the decision-making behavior of Transformer and GNN models in software vulnerability detection.
- Conducted quantitative analysis using the MIOU (Mean Intersection over Union) metric to evaluate the correlation between model attention regions and ground-truth vulnerabilities.
- Collaborated with the research team to analyze Aggregation Bias and investigate how token-level importance scores map to code lines for enhanced transparency.
- **Technical Used:** Python, PyTorch, PyTorch Geometric (PyG), Git.

Remote Software Developer (AI/Backend Focus) | MOONSHOOT | Apr 2025 – Jul 2025

- Built and operated RESTful APIs using FastAPI for modules such as user authentication (Magic Link, OTP), store management, and chatbot services.
- Integrated AI tools including OpenRouter (Chatbot) and Meilisearch (Product Search) into the backend infrastructure.
- Developed data collection systems for vendors such as Hasaki and Guardian using Selenium and BeautifulSoup, ensuring data normalization and synchronization with Alembic.
- Utilized Jira to track tasks and collaborate effectively within an Agile/Scrum workflow.
- **Technical Used:** Python, FastAPI, MySQL, Alembic, Git, Jira.

Python Developer Intern | AITSOFT Co., Ltd | Dec 2024 – Apr 2025

- Utilized Pandas to process, clean, and analyze historical candlestick data for signal generation and backtesting.
- Programmed automated trading scripts by implementing technical indicators (EMA, RSI) and tuning parameters on the Freqtrade platform.
- **Technical Used:** Python, Pandas, Freqtrade, Technical Analysis.

PROJECTS

Flight Delay Prediction GNN System (Real-time MLOps)

- Implemented a flight delay prediction model using Graph Attention Networks (GATv2) to model spatio-temporal dependencies between airports.
- Architected a real-time data pipeline integrating Apache Kafka for ingestion, Spark Structured Streaming for processing, and Apache Cassandra for data persistence.
- Developed a monitoring dashboard using Streamlit to visualize real-time prediction streams and system status.
- **GitHub:** https://github.com/haidangnguyen-cs/flight-delay-gnn-system
- **Technical Used:** Python, PyTorch Geometric (PyG), Apache Kafka, Apache Spark, Cassandra, Docker, Streamlit.

EDUCATION

Vietnam Aviation Academy | Ho Chi Minh City
Bachelor of Information Technology | 2022 - 2025
GPA: 3.08/4.0
TOEIC: 475 (Able to read technical documentation).

TECHNICAL SKILLS

- Languages: Python
- AI & Data Analysis: PyTorch (Basic), PyTorch Geometric (GNN application), Pandas (Data processing).
- Explainable AI (XAI): SHAP, LIME, GNN Exp, and Integrated Gradients (IG).
- Backend & Big Data: FastAPI, understanding of data pipelines with Kafka, Spark Streaming, and Cassandra.
- Tools & OS: Docker, Git, Linux.