

# VU TRONG CHAU

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## EDUCATION

### Troy University

Master of Science in Computer Science - Artificial Intelligence | GPA: 3.5

Troy, Alabama

July 2025

**Key Courses:** Analysis of Algorithms, Computer Architecture, Machine Learning, Advanced Artificial Intelligence, Data Visualization

### University of Sunderland

Bachelor of Engineering in Electronic and Electrical Engineering | UK 2:1 Honours (3.5 GPA equivalent)

Sunderland, UK

July 2021

**Key Courses:** Embedded systems, Electronic Circuits and Devices, Electrical Power, Electronic Systems, Manufacturing System Design

## WORK EXPERIENCE

### AI Evaluation Engineer

Sep 2025 – Present

TELUS Digital

Remote

- Evaluated LLM and NLP systems using structured benchmarking and error analysis frameworks, reducing recurring failure patterns by 20%
- Designed human-in-the-loop (HITL) evaluation pipelines to refine model reasoning, safety alignment, and response consistency
- Analyzed semantic relevance and retrieval quality to improve ranking signals and downstream AI-driven decision systems
- Monitored post-deployment model behavior to detect drift, anomalous outputs, and performance degradation trends
- Produced high-quality supervised and reinforcement learning datasets supporting iterative model refinement

### Advance Process Engineering (APE) Engineer

Aug 2021 – Dec 2023

Techtronic Industries (TTI)

Vietnam

- Led data-driven optimization initiatives for high-volume manufacturing lines, improving yield and reducing defects using statistical modeling
- Built structured datasets from sensor logs and quality metrics to support large-scale root cause analysis
- Applied regression analysis, Design of Experiments (DOE), and multivariate techniques to identify key process drivers
- Developed Python-based automation tools and dashboards to streamline KPI monitoring and engineering analytics

## PROJECTS

### Healthcare Chatbot | Python, Flask, LangChain, FAISS, PyTorch, FastAPI, Docker, CI/CD

Sep 2025 – Present

- Designed and deployed an LLM-powered healthcare assistant using Retrieval-Augmented Generation over 250,000+ medical records
- Implemented FAISS-based vector indexing and optimized prompt engineering, improving retrieval accuracy by 25%
- Architected FastAPI microservices with Docker-based CI/CD pipelines, reducing deployment cycle time by 40%
- Built scalable backend infrastructure for low-latency semantic search and response generation

### Threat Detection using Machine Learning | Python, Scikit-learn, XGBoost, Flask, Pandas, NumPy

Jan 2025 – July 2025

- Developed ML models (Logistic Regression, XGBoost, Random Forest, Naive Bayes), achieving 92% accuracy on 72,000+ labeled texts
- Engineered semantic, syntactic, and sentiment features, increasing classifier performance by 15%
- Built a real-time moderation interface using Flask, generating severity scores and reducing review time by 40%

### Global Population Prediction | Python, Pandas, NumPy, D3.js, ETL Pipelines, Data Visualization, Flask

Jan 2025 – May 2025

- Forecasted population trends (1960–2023) for 200+ countries using ML models, achieving <2% MAE
- Built interactive dashboards with choropleth maps and time-series visualizations to support research insights
- Automated scalable ETL pipelines reducing manual data updates by 60%

### Sleep Quality Prediction | Python, Scikit-learn, TensorFlow, CNNs, RNNs, Flask

Sep 2024 – Dec 2024

- Built ML and deep learning models (CNNs, RNNs, Random Forest) to predict sleep quality from 70,000+ lifestyle and biometric records
- Improved precision by 20% over baseline models through feature engineering and model tuning
- Developed a real-time Flask interface providing personalized recommendations

## TECHNICAL SKILLS

**Programming Languages:** Python, SQL, C/C++, JavaScript

**AI & Machine Learning:** RAG, LangChain, FAISS, Hugging Face, Prompt Engineering, Scikit-learn, TensorFlow, PyTorch, CNNs, RNNs

**ML Ops & Data:** FastAPI, Docker, CI/CD, ETL Pipelines, Pandas, NumPy, Tableau, Streamlit, AWS, GCP

## CERTIFICATIONS

LLM Application Engineering and Development | [Simplilearn](#)

Oct 2025

Data Science Methodology | [IBM](#)

Sep 2025

Generative AI with Large Language Models | [DeepLearning.AI](#)

Sep 2025