VU TRONG CHAU

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SUMMARY

Machine Learning Engineer with a strong background in applied AI, NLP, and IoT systems. Experienced in designing, training, and deploying end-to-end ML models with measurable impact. Skilled in building NLP pipelines, optimizing predictive models, and deploying real-time applications on cloud platforms (AWS, GCP, Azure). Recognized for bridging research and production, scaling data pipelines, and applying transferable problem-solving skills from embedded systems and data science to ML engineering.

TECHNICAL SKILLS

Programming Languages: Python, C++, JavaScript, MATLAB, SQL

Machine Learning & AI: Deep Learning, Neural Networks, NLP, LLMs, Decision Trees, Random Forest, CNNs, RNNs, XGBoost, SVM, Gradient Boosting

Frameworks & Libraries: TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy, Flask, D3.js

MLOps & Cloud: AWS SageMaker, GCP Vertex AI, Azure ML, Docker, Kubernetes, CI/CD Pipelines

Data & Visualization: Jupyter Notebook, SQL, Tableau, Power BI, Hadoop

IoT & Hardware (Transferable): Arduino, PCB Design, SolidWorks, AutoCAD

Language: English and Vietnamese

PROJECTS

Threat Detection using Machine Learning   Jan 2025 – July 2025
- Developed a cyberbullying detection system that classifies harmful online content using supervised machine learning models that achieve 92% accuracy (Logistic Regression, XGBoost, Naive Bayes, Random Forest, Decision Tree).
- Applied NLP preprocessing techniques include tokenization, stemming, and TF-IDF vectorization on 72,000+ labeled social media texts. Engineered semantic, syntactic, sentiment, and pragmatic features to enhance classifier performance.
- Developed a streamlined Flask interface for real-time input and results, emphasizing the identification of offensive words and generating a bullying severity score for better interpretability and effective real-time moderation.

Global Population Prediction   Jan 2025 – May 2025
- Developed an application to forecast global population trends from 1960 to 2023 for all countries in the world, allowing users to explore historical data and gain predictive insights.
- Build ML models that achieve 95% accuracy for prediction. Designed a user-friendly web interface with charts such as a choropleth map, line charts, and bar charts to help users easily manage and update information.
- Implemented using Python, D3.js, JavaScript, Python Web Server, Tailwind CSS, and Git, enabling scalable updates and easy user interaction.

Sleep Quality Prediction   Sep 2024 – Dec 2024
- Developed machine learning models (Logistic Regression, Random Forest, CNNs, RNNs) to predict sleep quality scores from 40,000+ lifestyle and data records.
- Engineered features including age, sleep duration, stress, heart rate, and daily steps, boosting performance to 96% accuracy (F1-score 0.96).
- Deployed a Flask dashboard enabling users to input lifestyle metrics, receive real-time predictions, and access personalized recommendations to improve sleep quality.

EDUCATION

TROY UNIVERSITY   July 2025
Master of Science in Computer Science (Artificial Intelligence Concentration) | GPA: 3.5

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

UNIVERSITY OF SUNDERLAND   July 2021
Bachelor of Engineering in Electronic and Electrical Engineering | UK 2:1 Honours (3.5 GPA equivalent)

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