LE PHUOC SANG
Intern Machine Learning

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SUMMARY

Final-year Computer Science student with hands-on experience in machine learning, computer vision, and model development. Proficient in Python and popular frameworks such as TensorFlow, Flask, and OpenCV. Successfully developed and deployed real-time applications including a speaker recognition system and an automatic exam grading platform. Strong skills in problem-solving, teamwork, and project management, with a passion for building practical tech solutions.

EDUCATION

Can Tho University of Technology   Can Tho, VietNam
Computer Science; GPA: 3.43 / 4.0   August 2021 – December 2025

TECHNICAL SKILLS

- **Languages :** Python
- **Frameworks :** Pandas, NumPy, Scikit-learn, Matplotlib, TensorFlow, Flask, OpenCV
- **Tools:** Microsoft Excel, PowerPoint, SQL Server, Adobe Photoshop
- **Platforms / IDEs:** PyCharm, Visual Studio Code
- **Soft Skills :** Problem Solving**,** Self-learning**,** Project Management, English Research Skills, Data Collection, Data Visualization, Community, Teamwork

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CERTIFICATE & AWARD

Consolation Prize – "Digitalization and Automation Solutions in Agro-Industry" Competition (Q4 2023, Can Tho University)

- [Overview]
- Task: Ca Mau Fertilizer product recognition
- Team size: 5 members
- Model used: YOLOv8

Google Certificate – Foundations of Project Management

- Issued by: Coursera | Google
- [View Certificate]

Scholarship – Can Tho University of Technology

- Awarded for academic excellence

PROJECTS

Fertilizer Classification | Phan bon Ca Mau [Github]   September 2023 – November 2023
- Objective: Developed a system to automatically detect and classify Ca Mau fertilizer products using YOLOv8 for object detection and DeepSort for real-time object tracking.
- Technologies Used: Python, YOLOv8, DeepSort, OpenCV, PyTorch, TensorFlow.
- Methodology: Collected and annotated images of various Ca Mau fertilizer packaging. Applied YOLOv8 to detect and classify fertilizer types, and integrated DeepSort to track multiple fertilizer bags in continuous video streams. Trained the model on a custom dataset with a focus on real-world warehouse and retail environments.
- Results: The system successfully detects and classifies Ca Mau fertilizer products in both images and video with high accuracy. Real-time tracking improves efficiency in inventory management and quality monitoring in agricultural supply chains.
- Skills and Experience: Object detection with YOLOv8, object tracking with DeepSort, image and video processing, dataset preparation, real-time AI application deployment.

Time Series Forecasting [Github]   Ferbuary 2024 – May 2024
- Objective: Developed a demand forecasting model using Long Short-Term Memory (LSTM) networks to predict future demand in the supply chain, optimizing inventory management and reducing risks of stockouts or overstocking.
- Technologies Used: Python, Pandas, NumPy, Keras, TensorFlow, LSTM, Scikit-learn.
- Methodology: Data preprocessing, feature engineering, and applying LSTM for time-series forecasting. The model was trained on historical sales data to predict future demand patterns.
- Results: Achieved high forecasting accuracy with low RMSE and MAE, significantly improving inventory management and supply chain efficiency.
- Skills and Experience: Time-series forecasting, LSTM modeling, data preprocessing, and supply chain optimization.

Speaker Recognition [Github]   **September 2024 – November 2024**

- Objective: Developed a speaker recognition system using Long Short-Term Memory (LSTM) networks for speaker identification, integrated with Flask to deploy the model on a web interface for real-time use.
- Technologies Used: Python, TensorFlow, Keras, Flask, LSTM, MFCC (Mel-frequency cepstral coefficients), Librosa, HTML, CSS, JavaScript.
- Methodology: Preprocessed audio data by extracting MFCC and Mel Spectrogram features. Applied LSTM networks for training the model to classify speaker identities from audio input. Used Flask to deploy the trained model as a web application where users can upload audio files and get real-time speaker identification results.
- Results: The system was successfully deployed and can accurately identify speakers in real-time, with a user-friendly interface for ease of use in applications such as voice-based security and authentication.
- Skills and Experience: Audio signal processing, machine learning with LSTM, Flask web development, real-time application deployment.

Automatic Exam Grading [Github]   **Ferbuary 2025 – May 2025**

- Objective: Developed an automatic exam grading system using computer vision and deep learning techniques to recognize and grade multiple-choice answer sheets. The system is designed to handle various answer formats, including cases where students revise their answers.
- Technologies Used: Python, OpenCV, YOLOv8, Deep Learning, OCR (Tesseract), Flask, HTML, CSS, JavaScript.
- Methodology: Collected and preprocessed scanned answer sheets. Employed YOLOv8 to detect and locate answer bubbles and student information. Applied image processing techniques to analyze filled-in choices and identify corrections or changes. Integrated OCR for extracting student IDs. Built a Flask-based web interface for teachers to upload exam images and receive automated grading reports.
- Results: The system accurately detects and grades answer sheets, even with erased or corrected answers. It significantly reduces manual grading time and ensures consistent scoring. The web interface provides real-time feedback and downloadable reports.
- Skills and Experience: Computer vision, object detection with YOLOv8, image preprocessing, OCR integration, Flask web deployment, automated assessment systems.