# Minh Trinh

## AI Engineer Intern

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## **EXPERIENCE**

## Python coding Tutor - Freelance

Mar 2023 - Mar 2024

- Guide students of varying skill levels through core Python programming concepts, including data structures, functions, and object-oriented programming, tailoring instruction to individual learning styles.
- Design and deliver customized lesson plans, hands-on programming exercises, and data science and data analytics projects to help students develop problem-solving skills and reinforce fundamental programming knowledge.
- Provide real-world examples and project-based learning, covering topics such as **data analysis**, **web scraping**, **and machine learning fundamentals**, to ensure a comprehensive understanding of Python applications.

## Data Analysis Intern - Vietstats

Apr - Jul 2025

- Collected, processed, and analyzed statistical data from public sources (GSO, yearbooks, census reports).
- Visualized and explored datasets using Python (Pandas, Seaborn, Requests, BeautifulSoup, Selenium) and Excel to support research insights.
- Built descriptive and regression models experimented with machine learning algorithms such as **KMeans** and **Decision Trees** for deeper analysis.
- Supported dashboard development with Power BI and helped optimize the data standardization workflow.
- Worked closely with a senior statistician, gaining hands-on experience in **data pipelines** and policy-driven data analysis.

## **PROJECTS**

## Animal Species Classification Using Convolutional Neural Networks(CNN)

May - Jul 2023

Personal Project

github.com/trinhminhds/90-Different-Animals-Image-Classification

- Curated and labeled a dataset of over 10,000 animal images from **Kaggle** for balanced training.
- Pre-processed images through **resizing**, **normalization** and **data augmentation**(rotation, flipping, and zoom adjustments), enhancing the model's ability to generalize across diverse lighting conditions and backgrounds.
- Designed and optimized a CNN architecture using TensorFlow and Keras, leveraging transfer learning with pretrained ResNet and EfficientNetB3 models.
- Deployed the model via a **Flask-based** web application for real-time species identification.

## Handwritten Digit Recognition System Using Support Vector Machine(SVM)

Jan - Apr 2024

Scientific Research, Faculty Information Technology, Gia Dinh University github.com/trinhminhds/Handwritten-Digit-Recognition

- Developed a handwritten digit recognition system using the **MNIST dataset** (60,000 training and 10,000 testing images).
- Implemented a Support Vector Machine (SVM) classifier with a one-vs-all strategy for digit classification.
- Built a web interface that allows users to **draw or upload digits** and perform basic arithmetic operations (addition, subtraction, multiplication, division) on recognized digits.
- Achieved high recognition accuracy with performance **evaluation** using metrics such as accuracy, precision, recall, and F1 score.

## AI-Generated Text Detection Using DeBERTaV3 and TensorFlow

May - Aug 2024

Personal Project

github.com/trinhminhds/LLM-Detect-AI-Generated-Text

• Constructed a text classification pipeline using TensorFlow and Keras NLP todetect AI-generated text with De-

### BERTaV3.

- Implemented data preprocessing, tokenization, and hyperparameter tuning via **StratifiedKFold** cross-validation.
- Trained a binary classification model (real vs. fake text) with a sigmoid activation function, incorporating learning rate scheduling and **W&B** for experiment tracking.

### **EDUCATION**

Bachelor of Information Technology, Big Data, Gia Dinh University

Oct 2022 - May 2025

• GPA: 3.2/4.0

#### **SKILLS**

**Programming:** Python, R, SQL, C/C++, Java.

**Libraries & Tools:** Pandas, Numpy, Matplotlib, Seaborn, Plotly, Scipy, Tkinter, Sckitlearn, TensorFlow, Keras, PyTorch, Flask, Beautiful soup, PowerBI, Tableau, GIT, Github, Linux.

**Data Wrangling:** Data Generation, Data Extraction, Data Cleaning, Exploratory Data Analysis, Feature Engineering, Feature Selection, Data Visualization.

**Machine Learning Skills:** Data Modeling, Clustering, Classification, Regression, Quantitative Analysis, Predictive Modeling, Statistical Modeling, Model Validation, Model Deployment, CNNs, RNNs, LSTM, BERT, Transformers.

Language: English basic.

### **COMPETITIONS**

- Participated in the 2023 Scientific Research Competition organized by the IT faculty at Gia Dinh University, with the project titled "Predicting Student Grades Using Machine Learning".
  - Processed historical student grade data to identify academic performance trends through data cleaning and visualization.
  - Developed predictive models to forecast graduation scores, supporting academic planning and student success strategies.
  - Recognized with a certificate for outstanding research project completion.

## **CERTIFICATIONS**

- Coursera IBM Data Science Specialization.
- Coursera Linear Algebra for Machine Learning and Data Science.
- Coursera Calculus for Machine Learning and Data Science.
- Coursera Probability Statistics for Machine Learning and Data Science

#### **PORTFOLIO**

To explore more on my projects please visit: https://trinhminhds.github.io