Tien Phu Tran

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Profile Summary

Computer Science senior (3.9 GPA, Expected Dec 2025) specializing in machine learning. Proven experience building high-accuracy (98.2%) computer vision models with Python, TensorFlow, and PyTorch. Seeking an entry-level Machine Learning Engineer role.

Education

University of Houston, B.S. in Computer Science – GPA: 3.9 June 2023 – December 2025

- **Relevant Coursework:** Artificial Intelligence, Natural Language Processing, Digital Image Processing, Data Science, Linear Algebra, Probability & Statistics, Data Structures & Algorithms, Database Systems

Houston Community College, A.S. in Computer Science – GPA: 4.0 August 2020 – May 2023

- **Relevant Coursework:** Python Programming, Computer Architecture

Projects

Full-Stack E-Commerce Platform (Link) Aug 2024 - Dec 2024

- Developed a full-stack e-commerce application in a team of 4, building a secure Node.js RESTful API and a responsive React UI with 10+ product filtering options. Implemented a real-time inventory management system with MySQL, achieving 99.9% data accuracy to eliminate overselling.
- Tools Used: React, Node.js, Express.js, MySQL, JavaScript, HTML/CSS, Git

AI-Powered Skin Lesion Classifier Aug 2024 - Dec 2024

- Developed and trained a CNN using TensorFlow to classify malignant vs. benign skin lesions, achieving a validation accuracy of 98.2% on a dataset of 10,000+ images.
- Engineered and compared multiple architectures (Custom CNN, ResNet50, MobileNetV2) through extensive hyperparameter tuning to select the top-performing model.
- Tools Used: Python, Keras, TensorFlow, scikit-learn, pandas

COVID-19 Chest X-ray Classifier (Link) Jan 2025 - May 2025

- Designed a deep learning model using PyTorch to classify chest X-rays (COVID-19, Pneumonia, Normal), achieving a validation accuracy of 91.5%.
- Utilized transfer learning with VGG-16 and applied data augmentation to a dataset of 5,000+ images to boost model robustness and performance.
- Tools Used: Python, PyTorch, Scikit-learn, Pandas, OpenCV

Dynamic Workflow Automation System (Link) Jan 2025 - May 2025

- Architected a full-stack Django application for an internal approval workflow, featuring a dynamic assignment hierarchy, role-based access, and PostgreSQL data storage. Integrated React for a dynamic UI and implemented a feature to convert form submissions into high-quality, LaTeX-generated PDFs automatically.
- Tools Used: Django, React, PostgreSQL, LaTeX, Python, JavaScript, HTML/CSS

Skills

Languages: Python, C++, Java, R, MATLAB, JavaScript, HTML/CSS

Frameworks: TensorFlow, PyTorch, Keras, Scikit-learn, OpenCV, NLTK, Django, React, Node.js, Express.js

Data Tools: Pandas, NumPy, SciPy, Matplotlib, Seaborn, Spark, SQL, PostgreSQL, MongoDB

Cloud & MLOps: AWS, Azure, Docker, Git

Core Concepts: Supervised/Unsupervised Learning, Deep Learning (CNNs, RNNs, LSTMs), NLP (Transformers, BERT), Recommender Systems, Gradient Descent, Model Evaluation Metrics