Minh (Tommy) Nguyen

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Experienced in AI/ML model fine-tuning, backend engineering, recommendation systems, and full-stack development

EDUCATION

Villanova University — Expected Dec 2025

Bachelor of Science in Computer Science - Honors Degree, Business Minor — ***GPA**: 3.97/4.00*

- **Awards**: Honors Program, Dean's List, Tapia 2024 Conference VU Scholar, Veritas Scholar ($64,000), Connelly-Delouvrier Scholarship ($30,000), AI-JAM US Silicon Valley (Gold medal)
- **Coursework**: Machine Learning, Large Language Models, Data Science, Database Systems, Linear Algebra, Discrete Mathematics, Statistical Methods, Operating Systems, Software Engineering, Data Structures and Algorithms, Analysis of Algorithms
- **Involvement** (Villanova University): Competitive Programming Team, Honors Student Advisory Board, Special Olympics Committee Member, Vietnamese Student Association Vice President, Badminton Club President

EXPERIENCE

AI Software Engineer Intern (Full-time) — May 2024 – Aug 2024

Olli Technology — *HCM City, Vietnam*

- Co-developed the personalized AI voicebot backend with 2 developers using **LangGraph** and **GPT API**; built its prototype using **Flask**, **React**, and **gRPC**, and helped secure a partnership with Malaysia's Minister of Education
- Developed an AI-powered image suggestion feature for a marketing assistant app, leveraging **Unsplash API** (free image library), **DALL-E API**, **GPT API**, and **gRPC**, achieving a 25% increase in user engagement

NLP Research Assistant (Part-time) — May 2023 – Present

Villanova Center for Research and Fellowships — *Villanova, PA*

- Identified objectives and gathered linguistic data requirements to fine-tune large language models for translation tasks, leveraging benchmark datasets of 700,000 sentences and improving BLEU scores by 43%
- Designed a proof of concept using web scraping, preprocessing pipelines, and native speaker annotations to create 100,000 parallel sentences in underrepresented Nigerian languages, scheduled for publication at ICWSM 2025

Data Scientist Intern (Part-time) — Sep 2024 – Dec 2024

Product Manager Accelerator - Remote — *Boston, MA*

- Extracted and processed data from 100+ business profiles using **Google Places API** and **Pandas**, creating a vectorized database with key metrics (e.g., ratings, location, community data) for efficient analysis
- Utilized **vector similarity**, **one-hot encoding**, ranking systems, and **Llama 2** to develop a recommendation system, boosting the online visibility of BIPOC-owned small businesses by 30% by providing tailored insights

PROJECTS

Facial Emotion Recognition Model | *Python, TensorFlow, Keras, Google Cloud* | *link* — Aug 2024 – Dec 2024

- Developed models to classify 7 basic emotions using **RAFDB** and **AffectNet** datasets (43,000 images)
- Implemented **EfficientNet**, **ResNet50**, and a custom CNN with fine-tuned layers and an attention mechanism, achieving 70% accuracy after training on **Google Cloud Virtual Machine**

DocScribe AI | *OpenCV, EasyOCR, LangChain, Python, Flask, Docker, AWS* | *link* — May 2024 – Present

- Built a Retrieval-Augmented Generation chatbot integrating **ChromaDB** for **vectorized** file storage and **similarity-based** data retrieval, enabling multi-session interactions in **ReactJS** that simulate ChatGPT
- Enabled text extraction from images using Contour Detection, Warped Transformation, and the **EasyOCR** model

VU Stock Exchange Platform | *Python, Flask, React, JavaScript, SQL* | *link* — Jan 2024 – May 2024

- Developed real-time stock data retrieval with **REST APIs**, interactive price visualizations using **Highcharts**, and an admin interface for portfolio management
- Designed **MySQL** database for user profiles, stock prices, and transactions; optimized for concurrent user access

TECHNICAL SKILLS

Languages: Python, SQL, R, JavaScript, TypeScript, Java, C/C++, HTML/CSS,
Frameworks: ReactJS, Vue.js, Flask, REST API, gRPC, Firebase
Developer Tools: Docker, AWS, Git, GitHub, Agile, Jira, MySQL, SQL Developer, VS Code, Google Colab, RStudio
Libraries: BeautifulSoup, TensorFlow, Transformers, Scikit-learn, LangGraph, LangChain, OpenCV, Pandas, NumPy