Minh (Tommy) Nguyen

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

EDUCATION

Villanova University | Expected Dec 2025
Bachelor of Science in Computer Science, Business Minor | ***GPA**: 3.96/4.00*
- **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**: Database Systems, Machine Learning, Large Language Model, Operating Systems, Software Engineering, Data Science, Analysis of Algorithms, Linear Algebra, Discrete Mathematics, Data Structures and Algorithms, Statistical Methods
- **Involvement** (Villanova University): Badminton Club President, Vietnamese Student Association Vice President, Special Olympics Committee Member, Competitive Programming Team, Honors Student Advisory Board

EXPERIENCE

Data Scientist Intern (Part-time) | Sep 2024 – Present
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

Software Engineer Intern (Full-time) | May 2024 – Aug 2024
Olli Technology | *HCM City, Vietnam*
- Co-developed the 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*
- Fine-tuned large language models (ByT5, NLLB, DeltaLM) for translation tasks using benchmark datasets of 700,000 sentences and leveraging **Transformers**, **Tensorflow**, and **nltk** libraries, improving BLEU-score by 43%
- Set to publish datasets of 100,000 parallel sentences in 2 underrepresented Nigerian languages, created through web scraping, data preprocessing, and native speaker annotations, at the ICWSM 2025 and COLING 2025 conferences

PROJECTS

RAG Chatbot | *OpenCV, EasyOCR, LangChain, Python, Flask, Docker, AWS* | *link* | May 2024 – Present
- Developed a chatbot leveraging **ChromaDB** for storing uploaded files as **vector embeddings** and **vector similarity** search to retrieve relevant data; designed multi-chat sessions in **ReactJS** to simulate ChatGPT
- Enabled text extraction from images using Contour Detection, Warped Transformation, and **EasyOCR** model

Campus Hero App | *Python, Flask, ReactJS, Docker, AWS* | *link* | Aug 2024 – Sep 2024
- Created and deployed a real-time incident alert system backend and a mental health chatbot backend on AWS
- Built a Public Safety Dashboard using **ReactJS**, allowing real-time monitoring of student safety on campus

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