GIA-HUY DO

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EDUCATION

Denison University, Granville, OH — Expected Graduation: May 2026
Bachelor of Science, Computer Science
Coursework: Object-Oriented Programming and Data structures • Data System • Linear Algebra

EXPERIENCE

VinUniversity, Hanoi, Vietnam — Sep 2021 – Present
Research Assistant

- Work on the application of Federated Learning & Differential Privacy in Smart health to address critical data privacy in hospitals.
- Discover and research highly efficient solutions to Yao's millionaires' problems using the Coordinate Encoding Mechanism.

Denison University, Ohio, USA — May 2023 – August 2023
Incoming Summer Research Scholar - Natural Language Processing

- Conducted research on the impact of adversarial dataset (SQuAD) and nature questions dataset (NQ) on the ability of machine learning models to handle unanswerable questions.

PROJECTS

Sentiment Analysis with LSTM and Attention | *Python, Natural Language Processing, GitHub* — August 2021

- Independently developed and implemented two Natural Language Processing (NLP) models, utilizing bi-directional Long Short-Term Memory (Bi-LSTM) and Attention mechanisms, to analyze sentiment in text data from scratch.
- Conducted comparative analysis of the models' efficiency in sentiment analysis, achieving accuracy rates of 78% and 89% respectively. Trained the models using datasets sourced from Amazon, IMDB, and Yelp databases.

Obstacle & sign detection Self-driving Car | *Python, AutoCAD, Arduino, GitHub* — August 2021 – May 2022
VinUniversity Computer Science and Engineering Competition

- Utilized CAD software to design and prototype the chassis for an automobile model, ensuring optimal performance and safety.
- Developed a program for self-driving systems to accurately identify road markings and traffic signs using image data transmitted via wifi from a vehicle's sensor and camera.

Premoji Machine Learning Chatbot | *Python, ChatBot, nltk, Machine Learning, GitHub*

- Designed and developed four distinct bots, including a chatbot, a sentiment bot, and movie and music suggestion bots.
- Utilized Python Chatterbot libraries to train and refine the bots' responses using the Cornell Movie-Dialogs Corpus database with high accuracy.

Virtual computer control | *Python App, Computer Vision, GitHub*

- Applied OpenCV, Mediapipe, and CVzone libraries to enable real-time tracking of hand and facial movements via user webcam.
- Developed and customized machine learning models to differentiate between left- and right-hand gestures, enabling the execution of distinct commands and tasks.

SKILLS

Java • Python • Full-Stack • React.js • HTML/CSS • C++ • JavaScript • NLP • Machine Learning