THU NGUYEN (SHE/HER)

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EDUCATION

Stony Brook University **Stony Brook, NY**

Bachelor of Engineering in Computer Engineering *Graduation: May 2028*

Scholarships: You Are Welcome Here Scholar, Global Excellence Scholarship

Relevant Coursework: Programming Fundamentals, Digital Logic Design, Linear Algebra, Discrete Mathematics

SKILLS AND TOOLS

- Programming Languages: Python, Java, SQL, JavaScript, C/C++, HTML/CSS
- Libraries: OpenCV, NumPy, SciPy, PyTorch, Pandas, Keras, Matplotlib
- Developer Tools: VS Code, Anaconda, PyCharm, Google Colab, Kaggle, Git/GitHub, Figma
- Hardware: Arduino IDE, MPLab X IDE, Oscilloscopes, Multimeters, Breadboards, Programmable Logic Devices
- Soft Skills: Leadership, Communications, Critical-thinking, Problem-solving, Time management
- Language: Vietnamese (native), English (fluent)

CERTIFICATIONS

Introduction to Data Science in Python **Online, Coursera**

University of Michigan *December 2024*

- Load, manipulate, and select data using NumPy. Understand the fundamental data types in the NumPy ecosystem.
- Apply regular expressions to string data.
- Learned about the series class and how to query a series structure. Learned about DataFrames and how to represent raw data with Pandas.
- Apply basic statistical test knowledge on DataFrames in Pandas.
- Learned about different classifications of structured data such as networks, graphs, and natural language.

RELEVANT EXPERIENCES

AI Community Internal Competition **Stony Brook, NY**

Second Prize *October 2024 - November 2024*

- Participated in a group of 2 to develop a convolutional neural network model to recognize resistors based on their color bands with an accuracy of approximately 72% when tested with the testing dataset.
- Utilized OpenCV to preprocess the dataset and Pandas to manipulate the CSV file.
- Augmented the data using PyTorch for a larger dataset that led to greater accuracy.
- Implemented the Cross Entropy Loss function to avoid data overfitting and increase accuracy when implemented with new datasets.

IEEE Micromouse Workshop **Stony Brook, NY**

Participant *October 2024 - November 2024*

- Learned about electronic components and their mechanisms such as Motors, H-Bridge, Microcontroller, IR Receiver, and IR Emitter,... and connected those on a breadboard with a given schematic to build an electronic micromouse.
- Coded in the Arduino IDE to make the micromouse function as desired: making the motors spin, the LEDs light up when detecting objects, and automating the micro mouse's process of figuring the shortest path to go out of any given maze with various algorithms: Wall-Follow Algorithm, Flood-Fill Algorithm. Explore other popular algorithms such as A* Search and Tremaux's Algorithm.

SUGAR Championship Vietnam **Ho Chi Minh, Vietnam**

Leader of Organizing Team *October 2022 – August 2023*

- Directed 4 specialized departments with over 50 students to organize 3 large-scale football tournaments with participants from numerous universities in the city that led to the promotion of sports spirits and success in fundraising over 26 million VND to support the education of underprivileged children.
- Directed monthly trips to both in-city and out-city orphanages which led to the promotion of compassionate connections between youths and underprivileged children.