Duc Manh Nguyen

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EDUCATION

University of Rochester **Rochester, NY**

Bachelor of Science in Computer Science *August 2018 – May 2022 (Anticipated)*

- Cumulative GPA: **3.93/4.0** (Dean's List all semesters)
- Dean's Scholarship
- Core Courses: Operating Systems, Data Structures & Algorithms, Computation & Formal Systems, Computer Organization, Artificial Intelligence.

EXPERIENCE

Got It, Inc. **Hanoi, Vietnam**

Software Engineering Intern *May 2020 – August 2020*

- Implemented single-entry endpoint API gateway as a reverse proxy to provide cross-cutting features between Got It's QueryChat Google Dialogflow services and MySQL database services.
- Migrated Got It's PhotoStudy dashboards REST APIs from PHP to Python to be consistent with PhotoStudy's migration to single-page application and improve maintainability.
- Speeded up the test coverage reporting process by 1.8x by building an automated workflow using Google Sheets API.
- Used Pytest for unit testing to improve QueryChat's codebase test coverage to 87%.
- **Technologies**: Python, Flask, FastAPI, SQLAlchemy, Pytest, Redis.

CMC Corporation **Hanoi, Vietnam**

Data Science Intern *May 2019 – July 2019*

- Contributed to a team project "Customs Fraud Detection", which shed light upon new practices in detecting fraud behaviors in customs declaration data.
- Implemented the Random Forest binary classifier to build a more reliable fraud detection model with F-1 score of 0.93.
- Identified the most robust model for the fraud detection problem by training and evaluating Machine Learning models using TensorFlow; improved accuracy by 11%.
- Retrieved and processed data from the General Department of Vietnam Customs using MySQL.
- **Technologies**: Python, TensorFlow, MySQL.

PERSONAL PROJECTS

University Chatbot

- Developed and deployed a chatbot on Slack to help university students with daily tasks.
- Chatbot was created and trained using the Rasa Language Understanding library; collected data by crawling the university's webpage.

Support Vector Machine Visualizer

- Implemented from scratch the Support Vector Machine classifier using the Sequential Minimal Optimization algorithm.
- Created a web-based interactive visualization for the Support Vector Machine using JavaScript and HTML.

Digit Recognition

- Implemented from scratch and trained a Convolutional Neural Network to classify hand-written digits with 93.3% accuracy using NumPy.
- Created a web app that can perform digit recognition on user's input using Flask and jQuery.

TECHNICAL SKILLS

- **Python**, **Java**, SQL, HTML, CSS, JavaScript.
- Flask, SQLAlchemy, MySQL, Redis, Docker, DigitalOcean, TensorFlow.
- Git, GitHub, Linux.