

Cheng Yu

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Education

University of Virginia

Master of Computer Science (GPA: 3.84 / 4.00)

August 2023 – May 2025

Charlottesville, Virginia

University of Maine

Bachelor of Science in Computer Science (GPA: 3.79 / 4.00)

August 2019 – December 2022

Orono, Maine

- **Honor:** Summa Cum Laude, International Presidential Scholarship, Dean's List

Shanghai Ocean University

Bachelor of Science in Marine Science (GPA: 3.23 / 4.00)

September 2016 – June 2020

Shanghai, China

- **Honor:** Second Class Renmin Scholarship

Experience

University of Maine

Student Tutor

September 2020 – December 2020

Orono, Maine

- Assisted in "STS232: Principles of Statistical Inference" course in Fall 2020 semester, attended by over 30 students.
- Held regular office hours, answering questions and providing learning guidance.
- Collaborated with other tutors to design and conduct quizzes for small study groups of 3-4 students.

University of Maine

Research Assistant

January 2020 – May 2020

Orono, Maine

- Conducted data analysis using Habitat Suitability Index model to evaluate American Lobster habitats, under Prof. Yong Chen's supervision.
- Analyzed environmental impact of offshore wind power developments in Gulf of Maine based on their construction feasibility and potential effect on local fisheries.

Second Institution of Oceanography

Data Analysis Intern

July 2019 – August 2019

Hangzhou, China

- Collaborated with 3 interns to develop a data analysis model using MATLAB, handling processing and visualization of a substantial globally observed Argo dataset, comprising approximately 1.8 million records.
- Validated model performance through simulating surface seawater temperature and salinity variations in selected geographic zones, optimized data manipulation and algorithm based on simulation results.

Projects

Pill Identification Web App | Python, TensorFlow, Django, PostgreSQL, Bootstrap

December 2022

- Developed a TensorFlow-based Convolutional Neural Network model for pill image identification.
- Processed and organized a dataset of 60+ pill categories for training and validation, each category consists of 10-20 images, created a database with PostgreSQL to store pill information.
- Integrated trained model into a Django-based web application, enabling real-time pill identification with user-uploaded images, fine-tuned model parameters to make it able to identify different pills with an average accuracy of 75.58%.

Multi-robot Navigation System | Scrum, Linux, PyQt5, Docker

May 2022

- Co-developed a mission control station for a multi-robot navigation system to support prof. Vikas Dhiman's research (UMaine ECE department), built project with Scrum process.
- Implemented asynchronous backend processes to dispatch different tasks to robots, co-designed and developed a GUI with PyQt5 for easy control.
- Dockerized application for cross-platform use and future research.

Technical Skills

Languages: Python, Java, C, SQL, HTML/CSS, MATLAB, R, JavaScript

Technologies: Django, Flask, Bootstrap, TensorFlow, PyTorch, OpenCV, Spark, Hadoop, AWS, Linux, Docker

Concepts: Compiler, Operating System, Virtual Machine, Machine Learning, RESTful API, Cloud Computing, Software Testing, Cybersecurity