

Meena Nagarajan

470-471-6124 | mnagarajan8@gatech.edu | [LinkedIn](#) | [Github](#) | Atlanta, GA

EDUCATION

Georgia Institute of Technology

Atlanta, GA

M.S. in Computer Science - Machine Learning

Grad: December 2024

- Advanced Algorithms & Uncertainty, Machine Learning Theory, Deep Learning, Conversational AI, Systems in Machine Learning, Internet Data Science, Data Networks & Systems

B.S. in Computer Science

Grad: December 2023

- Data Structures and Algorithms, Design and Analysis of Algorithms, Intro to AI, Human-Computer Interaction, Automata and Complexity, Comp. Organization and Programming, Applied Combinatorics, Machine Learning, Intro to Computer Vision

EXPERIENCE

Siemens Digital Industries Software (Huntsville, AL)

May 2024 – August 2024

Software Engineering Intern - Xpedition Layout

- Enhanced Xpedition Layout, a cutting-edge PCB design tool, by integrating advanced Python-based automations.
- Developed ANTLR-based script to automate codebase conversion of **1000+** VBScript files to Python, with functionality to optimize foundational libraries and translate processes.
- Integrated Python-based process automation into future code branches, ensuring compatibility and stability.

Siemens Digital Industries Software (Huntsville, AL)

January 2023 – December 2023

Software Engineering Intern - EDM Infrastructure

- Developed web-based electronic database management server for client project deployment and modification.
- Orchestrated automation of performance tests for **600** concurrent client applications, increasing efficiency by **30%**.
- Engineered Python-based solutions for data-driven decision-making and load generator management, resulting in **35%** boost in insights extraction and **400%** increase in load allocation efficiency.

Robotics and Intelligent Machines Center (Georgia Tech)

January 2022 – May 2023

Undergraduate Researcher

- Evaluated and enhanced cutting-edge autonomous profiler, pivotal in assessing Prince William Sound's recovery.
- Utilized Convolutional Neural Networks, such as InceptionV3 and Xception, to analyze diverse datasets comprising over **1,000** underwater images, achieving exceptional accuracy in distinguishing various oceanic life forms.
- Achieved impressive **98.87%** reduction in training time, optimizing efficiency from 6 hours to 4 minutes which enabled seamless adaptation of model to accommodate custom data.

College of Computing (Georgia Tech)

August 2024 – Present

Graduate Teaching Assistant - Computer Vision

- Guided students through complex computer vision concepts, offering comprehensive support in understanding algorithms, image processing techniques, deep learning models, and practical machine learning applications.
- Assisted in developing course materials, grading assignments, and conducting review sessions for **~500** students.

PROJECTS

American Sign Language Detection Model | *Python, Deep Learning, Convolutional Networks*

- Developed ASL detection model using tranformer encoder-decoders, LSTMs and Convolutional neural networks.

Cloud Resource Allocation with DQN-Karma Integration | *TensorFlow, Reinforcement Learning*

- Developed DQN agent for dynamic cloud resource allocation, enhancing efficiency/fairness with Karma algorithm.

Personalized Music Recommendation System | *Python, React, Node.js, Machine Learning*

- Created interactive system that recommends songs based on tonal structure of user input using clustering

Heart Disease Predictor | *Python*

- Created Python-based model for heart disease prediction, identifying key risk factors and patterns.

TECHNICAL SKILLS

Languages: Python, GO, Ruby TypeScript, Swift, Java, C, C++, C#, VBScript HTML/CSS, XML

Frameworks: ANTLR, React.js, Vue.js, Node.js, React Native, Expo, Django, TensorFlow, Unity

Developer Tools: Git, SVN, JIRA, Docker, Jenkins, Jupyter, Linux, Unix, Windows, Virtual Machines

Applications: MySQL, AWS, REST API, PHP, Jmeter Apache