Meena Nagarajan

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EDUCATION

Georgia Institute of Technology
Atlanta, GA

M.S. in Computer Science - Machine Learning | ***Expected: December 2024***
- Advanced Algorithms & Uncertainty, Machine Learning Theory, Internet Data Science, Data Networks & Systems, Deep Learning, Conversational AI

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
May 2024 – August 2024

Software Engineering Intern - Xpedition Layout — *Huntsville, AL*
- Enhanced Xpedition Layout, a cutting-edge PCB design tool, by integrating advanced Python-based automations.
- Developed an ANTLR-based script to automate the conversion of over **1,000** VBScript automation scripts to Python, optimizing foundational libraries and translation processes.
- Led Python-based process automation integration into the future code branch, ensuring compatibility and stability.

Siemens Digital Industries Software
January 2023 – December 2023

Software Engineering Intern - EDM Infrastructure — *Huntsville, AL*
- Developed a 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 a **35%** boost in insights extraction and a **400%** increase in load allocation efficiency.

Robotics and Intelligent Machines Center - Georgia Tech
January 2022 – May 2023

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

College of Computing - Georgia Tech
August 2024 – Present

Graduate Teaching Assistant - Computer Vision — *Atlanta, GA*
- 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

Cloud Resource Allocation with DQN-Karma Integration | *TensorFlow, Reinforcement Learning* Spring 2024
- Developed DQN agent for dynamic cloud resource allocation, enhancing efficiency/fairness with Karma algorithm.

VR Training for self-driving cars | *Unity, SteamVR, C#* Fall 2023
- Integrated driver assist controls into Unity's Toyota Camry model for VR training, optimized for VIVE Pro.

Heart Disease Predictor | *Python* Spring 2023
- Created Python-based model for heart disease prediction, identifying key risk factors and patterns.

MeeChat | *Python, HTML, CSS, JavaScript* Fall 2022
- Created a chatbot to boost user engagement, providing interactive, automated responses, and streamlining operations by reducing response time and support workload.

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