

Abhinav Gupta

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Looking for Full Time Roles Starting May 2023

EDUCATION

Georgia Institute of Technology

Master of Science in Computer Science, GPA 4.0/4.0

- Specialization in Machine Learning

Aug 2021 - May 2023

Atlanta, Georgia

International Institute of Information Technology, Hyderabad

Bachelor of Technology (Honors) in Computer Science, GPA 8.49/10.00

Aug 2017 - May 2021

Hyderabad, India

EXPERIENCE

Amazon

Software Engineering Intern

- Currently working on building a new testing platform for high-scale functional and low-fidelity performance testing of robotic movement software as part of the Performance Platform team at Amazon Robotics.

August 2022 – Present

North Reading, MA

Meta (Facebook)

Software Engineering Intern

- Built a new internal tool from scratch in ReactJS and PHP that allows Meta employees to delete and deactivate their test users for debugging new features in the Meta Accounts Center. This tool is actively used by Meta employees working in the Growth organization everyday to debug and test their code.
- Created push blocking detectors which fire alerts when there is a drop in the deletion, deactivation and reactivation success rate of Facebook and Instagram users from the Meta Accounts Center flow.

May 2022 – August 2022

Menlo Park, CA

Siemens

Software Engineering Intern

- Worked on human pose estimation and ML methods for action recognition. Trained a heuristic-based fall detection model in Python and Tensorflow on a manually curated dataset to detect human falls with an accuracy of 72%.

May 2020 – July 2020

Bangalore, India

Robotics Research Center

Machine Learning Intern, Advisor: Dr. K. Madhava Krishna

- Implemented the first-ever deep neural network based MPC approach for vision-based robot navigation with a 78% decrease in the navigational time. My papers were published at top tier robotics venues - [CoRL 2020](#) and [IROS 2021](#)

May 2019 – July 2021

Hyderabad, India

TECHNICAL SKILLS

Languages: C/C++, Python, PHP, JavaScript, MATLAB, SQL, HTML/CSS, Elm/Racket, Golang

Machine Learning: TensorFlow, PyTorch, ROS, OpenCV, Caffe, Keras, Pandas

Frameworks and Tools: ReactJS, Node.js, Flask, Git, Docker, Linux, Bash, OpenGL, L^AT_EX

RESEARCH AND PUBLICATIONS

- *RTVS: A Lightweight Differentiable MPC Framework for Real-Time Visual Servoing* [Project Page]
IEEE International Conference on Intelligent Robots and Systems (IROS), 2021, Prague, Czech Republic
- *DeepMPCVS: Deep Model Predictive Control for Visual Servoing* [Project Page]
4th Annual Conference on Robot Learning (CoRL), 2020, Massachusetts Institute of Technology, Boston, USA

SELECTED PROJECTS

Anti-Vaccine Tweet Identification | *Machine Learning*

- Preprocessed over a thousand tweets using multiple classic NLP techniques to create robust word vector embeddings and trained various ML models to identify and classify anti-vaccine tweets with an accuracy of 76.43%. [Python]

Reconstructing Covid-19 Infection Traces | *Machine Learning*

- Recovered the exact infection spread of Covid19 in South Korea, including identifying likely-infected nodes and seed nodes, using machine learning and directed Steiner-trees on epidemiological datasets. [Python]

Epiphany: Quizzing Web App | *Software Development*

- Built an interactive quizzing web-application with a React front-end and a Golang server at the backend [React, Go]

Visual Odometry | *Computer Vision*

- Implemented a monocular visual odometry algorithm to recover the trajectory of the drone using only the input of a camera, and the 8-point algorithm with RANSAC for fundamental matrix estimation. [Python]