

# MAHESH NATAMAI

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## EDUCATION

**Georgia Institute Of Technology**  
BS Computer Science *GPA: 4.0*

Expected Graduation: Dec 2024  
*Atlanta, GA*

**Relevant Coursework:** Data Structures And Algorithms, Discrete Mathematics, Linear Algebra

## WORK EXPERIENCE

### Brains 4 Drones

*Computer Vision Intern*

Jun 2021 - Sep 2021

*Plano, TX*

- Led project systematically testing novel keypoint detection/description algorithms for simultaneous localization and mapping (SLAM) on autonomous drones.
- **Increased accuracy of keypoint matching algorithm by 15%** by varying standard algorithm.
- Developed custom algorithm to efficiently select photos for drone camera calibration from 5-dimensional point cloud, **reducing calibration times by ~ 10-20 seconds**.
- Simulated drone hardware pipeline for keypoint descriptor experiments using python and jupyter notebooks. Vectorized implementations using numpy for a **>10x speedup**. Utilized Robot Operating System (ROS) to interface with collected bag data.

### Fiverr

*Discord Bot Developer*

Nov 2020 - Jun 2021

*Plano, TX*

- Seller with over **18k impressions**, **30+ clients**, and a **5.0 star rating** for Node.js discord bot development.
- Integrated 3rd party APIs (twitch, hosting services, custom servers, etc.), using MongoDB and MySQL.

## PROJECTS

### AI Powered Video Search *Python, Flask, Pytorch, React.js, Tailwind*

<https://getscry.tech>

- Architected web app leveraging OpenAI's machine learning models to search through video frames and audio transcripts with natural language prompts, enabling surveillance systems to be easily navigable.
- Used ANNOY index to efficiently compute similarity scores. Created custom video downloading, diarization, transcription, and embedding generation pipeline.

### Sign Language Classifier *Next.js, Python, Flask, Tensorflow*

<https://github.com/MaheshNat/Signify>

- Designed to enable members of the deaf and hard of hearing communities to communicate with those who do not understand ASL (American Sign Language) using machine learning.
- Leverages custom-trained convolutional neural network (CNN) built using Tensorflow to translate ASL.

### Skill Bartering Platform *MongoDB, React.js, Node.js*

<https://github.com/MaheshNat/Menter>

- Architected during a hackathon as an education tool for skill bartering, i.e. allowing students to learn skills if they have something to teach in return.

## VOLUNTEERING/CLUBS

### Bits Of Good

*Fullstack Engineer*

Aug 2022 - Present

*Atlanta, GA*

- Developing platform for nonprofit "Motherhood Beyond Bars" enabling incarcerated women to communicate with their children and receive necessary products. Using Next.js and Firebase.

## SKILLS

Programming Languages:	Python Java JavaScript TypeScript Node.js HTML CSS
Web Frameworks/Libraries:	React/Redux Next.js Angular Flask Express.js Firebase
Data Science:	Numpy Pandas Tensorflow Matplotlib OpenCV
Misc:	MongoDB MySQL PostgreSQL Agile Git Linux

## AWARDS

### First place in the tech category, most voted

Jumpstart Edtech Hackathon

Won first place in the tech category and most voted out of 200 participants for my team's submission to the Jumpstart Edtech startup competition/hackathon: Menter.

### First place

Congressional App Challenge

Won first place for Signify, an app submitted to the congressional app challenge