

# MATTHEW KAUFER

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## EDUCATION

**Georgia Institute of Technology** (Georgia Tech), Atlanta, GA

August 2016 – May 2019

- Candidate for B.S. in Computer Science, GPA: 3.91 / 4.00
- Concentrations in Artificial Intelligence & Devices

## SKILLS

**Programming Languages:** JavaScript, Java, Python, HTML, CSS/SASS, C

**Frameworks & Libraries:** Django, Node.JS, AWS, sklearn, MongoDB, three.js, Android, React, Handlebars

**Spoken Languages:** German (proficient)

## WORK

**Intro to Robotics and Perception Teaching Assistant**

August 2018 – Present

Georgia Tech, Atlanta, GA

- Explain robotics concepts to students, including particle filtering, image classification, and path planning
- Grade students' quizzes and labs

**EC2 Security Infrastructure Intern at Amazon**

May 2018 – August 2018

Seattle, WA

- Designed, built, and tested software to handle data from and validate health of millions of EC2 instances
- Wrote code to be deployed in 16 AWS regions across the globe
- Utilized internal build systems and deployment pipelines

**Research Assistant at Robotic Musicianship Research Lab**

August 2017 – Present

Georgia Tech, Atlanta, GA

- Trained machine learning models for signal processing of ultrasound data
- Utilized said models to interface with prosthetic arm using patent pending technology
- Designed a system for musical improvisation with genetic algorithms
- Connected musical improvisation system to a marimba playing robot
- Built NLP and audio synthesis systems for robotic companion

**HackGT Organizer**

November 2016 – Present

Georgia Tech, Atlanta, GA

- Create and maintain technologies such as HackGT's registration app, check-in app, and event websites, handling data from over 6,000 applicants
- Lead workshops to teach students about technologies such as web and android development
- Build interactive NFC platforms to keep hackers engaged and connected with one another

**Backend Engineering Intern at Remy**

May 2017 – August 2017

New York, N.Y.

- Built an AWS Lambda function using OCR to automatically extract text from uploaded documents and store them in an ElasticSearch server, allowing audit compliance data to be easily queryable
- Engineered Keras models to estimate monetary impact of financial audits in the healthcare industry
- Wrote comprehensive unit tests for Remy's backend platform in Django

## PROJECTS

**MyoThreeArm**

- Developed a wave categorization algorithm to interpret muscle movements from an EMG
- Created a virtual arm with three.js to connect to the algorithm, functioning as a virtual prosthetic
- Categorized unique gestures ranging from a closed fist to letters in sign language

**MetaDrone**

- Created an augmented reality drone control platform using Meta Glasses
- Enable users to control the altitude, pitch, and yaw of an AR.Drone 2.0 using hand gestures