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# Thomas Lang

https://bopas2.github.io US Citizen

# EDUCATION

## Georgia Institute of Technology

Atlanta, GA

B.S. in Computer Science, GPA: 3.9/4.0

Aug 2018 - Dec 2021

M.S. in Computer Science (Machine Learning), GPA: 4.0/4.0

Jan 2022 - Dec 2022

Classes: Data Structures & Algorithms, Objects & Design, Systems & Networks, Machine Learning, Info Security

## EXPERIENCE

Capital One McLean, VA

Incoming Software Engineering Intern

Jun 2021 - Aug 2021

NCR Corporation

Atlanta, GA

Site Reliability and Engineering Intern

 $Jun\ 2020-Jan\ 2021$ 

- Built a framework to test Kubernetes deployments on Google Cloud against infrastructure failures.
- Ran tests using Python and Litmus and deployed the app using Kubernetes, Docker and Helm.
- Built a CI/CD pipeline using Harness to deploy new updates to multiple cloud environments.
- Ran tests on five real applications, visualized response times and presented results to teams.

# Georgia Tech Research Institute

Atlanta, GA

Software Engineering Intern

Jan 2020 - May 2020

- Developed a text document anti-virus feature for the Apiary malware analysis framework.
- Used Python and statistical analysis methods to flag tens of thousands of stored files as malware.
- o Created new web-pages, API endpoints, unit tests and a method for opening malware safely in a virtual machine.
- Interfaced with MongoDB and Elasticsearch databases to store prior results and to better analyze new samples.

# Georgia Tech Research Institute

Atlanta, GA

Research Assistant

May 2019 - Jan 2021

- Developed algorithms that use sensor data collected from an airplane to analyze ocean water and terrain.
- First Author, "Simulation and optimization-based method of environmental parameter distribution from airborne bathymetric LIDAR data" SPIE Defense + Commercial Sensing, Orlando Florida, United States, 2021

# NASA Glenn Research Center

Cleveland, OH

Research Assistant

May 2018 - Jun 2018

• Shadowed an engineer and implemented a machine learning algorithm in a micro-controller using C++.

## Involvement

### HackGT, Tech Team Member

- Worked on a team to build a website for streaming virtual hackathon events using React, Node and MongoDB.
- Applied natural language processing and data science techniques for internal processes.

#### RotorJackets, Secretary

- o Organized events, recruited new members and helped found a club for flying FPV drones.
- Built a website for member registration with a login portal and api connections to Paypal and Google sheets.

## Georgia Tech Automotive Research Lab, Software Team Lead

- Worked on a multi-semester project with other students and school faculty to create an autonomous vehicle.
- Led ten students in implementing self-driving vehicle algorithms using Python, C++ and ROS.

# Skills & Awards

Languages: Python, Java, JavaScript, TypeScript, C++, C

**Technologies**: Git, Node, Express, Flask, React, MySQL, MongoDB, Elasticsearch, Docker, Kubernetes, Helm, GCP, Cloudbuild, AWS (Lambda, EC2), Harness, Android Studio, ROS

Awards: Boy Scouts of America (Eagle Scout), Hyland Hackathon (1st Place), Capital One Hackathon (2nd Place)