# Thomas Lang

langthomas@gatech.edu • (216) 678-0678 • US Citizen • Cleveland, Ohio

## Education

**Georgia Institute of Technology**, Atlanta, GA ..... GPA: 3.9/4.0 | Aug 2018 – May 2022
Candidate for Bachelor of Science in Computer Science
Concentrations: Systems & Architecture and Intelligence

## Skills

Programming: Java, Python, C++, Scala, Matlab, HTML, CSS, Javascript
Software: Git, Vue.js, Bootstrap, Android SDK, Linux, Arduino, Robot Operating System, Jekyll
Coursework: Object oriented programming, Data structures & algorithms, Object oriented software design

## Experience

Georgia Tech Research Institute – *Internship* | May 2019 – Present
- Rewrote a codebase of Matlab scripts in Python, improving ease of access and system scalability.
- Increased algorithm efficiency and wrote detailed documentation which didn't previously exist.
- Researched and developed novel machine learning algorithms for Bathymetric (ocean) LiDAR sensors to detect and visualize seafloor surfaces.

Georgia Tech's Automotive LiDAR Research Lab – *Research Assistant* | Jan 2019 – Present
- Used python to parse, remove noise and visualize LiDAR sensor data.
- Integrated ROS into the automotive computer system to simplify code structure, run python files in parallel and implement vital localization and path-finding algorithms.

NASA Glenn Research Center – *Internship* | May – June 2018
- Proved a machine learning algorithm's feasibility in a microcontroller by training the algorithm to control a small shoe-sized car and to avoid obstacles by reacting to ultrasonic sensor readings.

Cleveland State University's Math Corp – *Teaching Assistant* | Summers 2016 & 2018
- Tutored inner-city students, teaching them algebra and building their academic confidence.

## Projects

"RISK" Boardgame Webapp – *CS2340 Team Project* | Jan – May 2019
*A multiplayer webapp version of the boardgame "RISK".*
- Designed an interactive front-end for the webapp using Vue.js, Bootstrap and HTML Canvases.
- Used a Websocket API with a Play Framework backend to allow multiple users to play together.
- Worked in a team of five, using Git for version control and Agile development to meet deadlines.

Discord Conversation Analyzer – *Personal Project* | Sept – Nov 2018
*A Tool for the Discord messaging service which provides information about prior conversations.*
- A Python application that uses chat logs and natural language processing algorithms to extract keywords about prior conversations, saving user time in staying caught up with missed discussion.

Hyland Software Hackathon – *First Place Winner* | Jan 2017
*Created a mobile app that combines walking and video-games to encourage exercise*
- Used Android Studio to create an interactive user interface and to record and store pedometer data.

## Involvement

Robojackets – *Robocup Software Team Member* | Aug 2018 – Present
- Designed and implemented a new defense strategy for Georgia Tech's autonomous robot soccer team to improve an out-dated system before competition.
- Volunteered during the IRIM national robotics week to introduce young students to robotics.

Boy Scouts of America – *Eagle Scout* | Jan 2010 – Apr 2018