

# Logan Stack

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Detroit, MI 

## Work Experience

### Software Engineer II – General Motors (Autonomous Vehicles)

Detroit, MI • 2022 - Present

- Taught myself React and Flask in order to build a web application that hosts in-house software for our camera, LiDAR, and radar teams
- Developed 6 unique tools with Python for the evaluation of image properties such as color and clarity
- Used YOLOv7 object detection algorithm and a gimbal hardware API to automate camera target testing
- Increased runtime efficiency of a patent-pending modulation transfer function (MTF) algorithm by 55%
- Designed a color filter array in Python that contributed to an intrinsic camera calibration software
- Mentored six junior software engineers (two at a time), supervising their work and career growth

### Dev Ops Engineer – General Motors (Vehicle Motion and Embedded Controls)

Detroit, MI • 2019 - 2022

- Co-authored a Jenkins-based continuous integration & continuous development pipeline, written in Groovy, that is responsible for regularly building, testing, and logging 65 software components
- Wrote a script in Python that detects build errors and reports them directly to the offending author
- Utilized Python and Git repository history to automate the generation of release letter content for Electronic Control Units, serving as official business records with 10 new records being generated daily
- Devised a system for automated archival of data in compliance with information lifecycle management

### Software Engineer Intern – Michelin

Greenville, SC • 2018 - 2018

- Authored a repository migration application to automatically transfer data from Subversion to Git using the Grails framework
- Created a blockchain to track resource allocation and value analysis in End User Experience using Multichain, MongoDB, Express.js, Angular 6, and Node.js

## Education

### B.S. in Computer Science – The Pennsylvania State University

University Park, PA • 2015 - 2019

## Technical Skills

**Languages** - Python, C++, C, Java, Groovy, Javascript, HTML/CSS, MySQL, Lua, Perl

**Tools & Frameworks** - Flask, React, Node.js, Electron, Bootstrap, Git, Jira, Jenkins, Docker

**Certifications** - SAFe 5.1 (Scaled Agile Framework), Design for Six Sigma (DFSS)

## Projects

**picture\_book** Python

- Uses topic modeling to determine the central theme of each page of a PDF and adds DeepAI generated illustrations accordingly

**OpenGL Video Game** C++

- Developing a remake of the classic arcade game "Tron" rendered with 3D graphics using OpenGL