

Education

BS in Computer Science **University of Virginia** **Graduating in Dec 2020**

- BS in Computer Science, BA in Statistics. **Cumulative GPA: 3.95, Major GPA: 4.00**
- Selected Coursework: Algorithms, Machine Learning, Data Structures, Cybersecurity, Software Engineering Methods, Applied Linear Models, Linear Algebra, Probability, Mathematical Statistics

Experience

Software Engineer Intern **Leidos** **May 2019 – Current**

- Contributed to the development of open source simultaneous localization and mapping (SLAM) libraries in order to reconstruct 3-D point cloud models from real time video streams.
 - Added support to allow multiple video streams to contribute towards a single reconstruction.
 - Created bag of visual words vocabulary training pipeline for binary descriptors.
- Led the development of a rust web server capable of directing incoming video data into SLAM processes and directing SLAM data to connected clients.
- Gained experience with computer vision, machine learning, rust, C++, python, docker, git, and gdb.

Research Assistant **University of Virginia** **Sept 2019 – Current**

- Investigating the use of MANETs (Mobile Ad Hoc Networks) to enable a connected transport system between autonomous vehicles.
- Currently developing an Android mobile application with Kotlin to test the feasibility of ad-hoc communication between pedestrians and autonomous vehicles.

Teaching Assistant **University of Virginia** **Aug 2018 – May 2019**

- Provided assistance on problem sets during lectures to 150 ordinary differential equation students. Graded exams, quizzes, and daily homework assignments.

Personal Projects (Source Code Available on Github)

- **Grade Manager** Fully featured PyQt5 desktop application for tracking grades across multiple courses. Supports various grading schemes and offers one light and two dark themes.
- **PDF-Packages** TkInter desktop application for bookmarking, combining, and converting PDFs.
- **Paginated Table Extractor** Highly efficient data extractor designed to completely automate the extraction of data from HTML tables that only show a subset of all available data per page.
- **Whoopie Pie Bot** A python bot that emails subscribers whenever the University of Virginia dining menus mention whoopie pies. Deployed on a raspberry pi zero.
- **Arch Linux Dotfiles** My i3, polybar, xresources, zsh, st terminal, and various other configuration files are available to download so that my desktop environment can be easily emulated by others.

Technical Skills

- **Programming Languages:** Python, C++, Java, Rust, R, Kotlin, HTML, CSS, SQL
- **Linux:** Debian, RPM, and Arch based distributions. Shell scripting with bash, zsh, and python.
- **Others:** Git, Docker, Django, QT, Tkinter, Opencv, Numpy, Pandas, Tensorflow, GDB