jrodal.dev
github.com/jrodal98

Jacob Rodal

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Education

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

- BS in Computer Science, BA in Applied Statistics. **Cumulative GPA: 3.94**
- Selected Coursework: Machine Learning, Computer Vision, Algorithms, Database Systems, Data Structures, Cybersecurity, Operating Systems, Linear Models, Linear Algebra, Probability

Industry Experience

Software Engineer Intern	**Facebook**	**May 2020 − Aug 2020**

- Designed and built an internal framework that enables Facebook engineers to create complex, large scale campaigns to simulate the behavior of bad actors and bots on Instagram.
- Implemented support for simulating behavior relating to profile updates, content publishing, engagement, and interactions between Instagram users.

Software Engineer Intern	**Leidos**	**May 2019 − Sept 2019**

- 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.
- Led the development of a rust web server capable of directing incoming video data into SLAM processes and directing SLAM data to connected clients.

Academia

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.
- Developed an Android mobile application to test the feasibility of ad-hoc communication between pedestrians and autonomous vehicles. Discussed the results in my Bachelor Thesis.

Teaching Asssistant	**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)

- **Watch Scripts** A tutorial for executing shell commands on your Linux computer from your smartwatch - 45+ stars on Github. Top 20 all time post on a unix subreddit with 260,000+ subscribers.
- **Brunnylol** A smart bookmarking/search management tool for browsers, inspired by Facebook's bunnylol. Webserver implemented using the Rocket Rust framework and deployed to a VPS.
- **Screenshot Actions** Implemented OCR and file manipulation actions for the Dunst Notification daemon that users interact with through dmenu after taking screenshots - 40+ stars on Github.

Technical Skills

- **Programming Languages**: Python, Rust, Hack, Bash, C++, Java, R, 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