Zachary Lawrence

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Work Experience

Nov 2018 - Present
Google.org Fellowship (partnering with the Vera Institute of Justice)
Software Engineer
- Collaborate with technical and non-technical external partners to build and maintain datasets and visualization based on US incarceration rate data
- Extract tabular data from PDF/HTML/Excel to store in a structured SQL database
- Normalize data from multiple sources to enable cross-jurisdiction comparisons
- Create visualizations by joining/aggregating datasets using Pandas and Matplotlib

July 2016 - Nov 2018
Google
Software Engineer
- Computed metrics using data-parallel pipelines and rendered them to dashboards
- Developed software for Linux and Chrome OS based video conferencing devices
- Scoped and designed a custom project for two interns managed over 3 months
- Mentored colleagues to improve code readability/health best practices

June 2015 - Aug 2015
Facebook
Software Engineering Intern
- Worked with the New Technology Team under the Connectivity Lab (Internet.org)
- Researched uses of various wireless protocols and IoT devices

June 2014 - Aug 2014
Google
Software Engineering Practicum Intern
- Designed and implemented a load testing framework based on HTTP/RPC requests

Academic Research

Jan 2016 - May 2016
Audio Based Material Classification
Advised by Dr. Gilmer Blankenship, University of Maryland
- Researched and implemented signal processing and machine learning techniques for material classification based on an object's acoustic signature

Aug 2013 - Dec 2015
Sidewalk Accessibility Issue Detection (Human-Computer Interaction Lab)
Advised by Dr. Jon Froehlich and Kotaro Hara, University of Maryland
- Parsed Google Street View images with OpenCV to find sidewalk accessibility issues
- Visualized accessibility issues with Matplotlib, D3 and a custom Google Glass app

Technical Skills

Languages:	Java, Python, C, JavaScript, SQL
Software Platforms:	Linux, Robot Operating System, GCP/AWS
Software Frameworks:	Pandas, Matplotlib, D3, Data-Parallel Pipelines, OpenCV, HTTP APIs
Workflow:	Git/Github, IntelliJ, Agile/Extreme Programing
Hardware:	Raspberry Pi, Arduino, Zigbee/Zwave (Wireless Protocols), Circuit Design

Education

May 2016 Bachelor of Science, Computer Engineering
University of Maryland, College Park
Gpa: 3.8/4.0 | Dean's List (All Semesters)