

Zachary Lawrence

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WORK EXPERIENCE

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| JULY 2019 -
PRESENT | Vera Institute of Justice
<i>Data Scientist</i> <ul style="list-style-type: none">• Cleaned and analyzed immigration court proceedings and ICE detention data• Co-created a stochastic SEIR model simulating the spread of COVID-19 across ICE's detention facility network (with book-in, book-out and transfer mechanics)• Designed and implemented an AWS cloud solution for data collection and processing• Introduced tools to improve collaboration and automation: GitHub, Docker, CI/CD |
| JULY 2016 -
MAY 2019 | Google
<i>Software Engineer</i> <ul style="list-style-type: none">• Created a distributed data pipeline to process and render metrics to a dashboard• Developed software for Linux and Chrome OS based video conferencing devices• Directly coordinated with external partners to produce data and software solutions• Mentored colleagues to improve code readability/health best practices |

ACADEMIC RESEARCH

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| JAN 2016 -
MAY 2016 | Audio Based Material Classification
<i>Advised by Dr. Gilmer Blankenship, University of Maryland</i> <ul style="list-style-type: none">• 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)
<i>Advised by Dr. Jon Froehlich and Dr. Kotaro Hara, University of Maryland</i> <ul style="list-style-type: none">• 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

ANALYSIS: Distributed Simulations, Descriptive Statistics
LANGUAGES: Java, Python, C, JavaScript, SQL
PLATFORMS: Linux, AWS/GCP, Git/GitHub, Docker, Web APIs
FRAMEWORKS: Pandas, TensorFlow, Distributed Data Pipelines, Web Scraping, Interactive Visualizations

EDUCATION

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

PUBLICATIONS & PATENTS

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| JUNE 2020 | The Hidden Curve: Estimating the Spread of COVID-19 among People in ICE Detention
See: https://www.vera.org/the-hidden-curve-covid-19-in-ice-detention |
| FEB 2020 | Managing a Device Cloud (Patent Number: US 10,567,479 B2) |
| SEPT 2019 | Controlling a Device Cloud (Patent Number: US 10,412,160 B2) |
| JUL 2019 | Rules Engine for Connected Devices (Patent Number: US 10,348,798 B2) |