

Zachary Lawrence

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EDUCATION

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

TECHNICAL SKILLS

LANGUAGES: Java, Python, C, JavaScript, Matlab, LabVIEW, SQL
SOFTWARE PLATFORMS: Linux, Robot Operating System, AWS (EC2/S3)
SOFTWARE FRAMEWORKS: Data-Parallel Pipelines, Dependency Injection, Protocol Buffers, RPC, REST
WORKFLOW: Git/Github, Agile/Extreme Programming, IntelliJ
HARDWARE: Raspberry Pi, Arduino, Zigbee/Zwave (Wireless Protocols), Circuit Design

WORK EXPERIENCE

- JULY 2016 - PRESENT | **Google**
Software Engineer
- Developed software for Linux and Chrome OS based video conferencing devices.
 - Computed metrics using data-parallel pipelines and rendered them to a dashboard.
- JUNE 2015 - AUG 2015 | **Facebook**
Software Engineer Summer Intern
- Worked with the New Technology Team under the Connectivity Lab (Internet.org).
 - Researched uses of various wireless protocols and IOT devices (Internet of Things).
- JUNE 2014 - AUG 2014 | **Google**
Software Engineering Practicum Summer Intern
- Created a load testing framework based on HTTPS and RPC requests.
- JUNE 2013 - AUG 2013 | **ITT Exelis: Geospatial Systems**
Software Engineer Summer Intern
- Designed and implemented a RESTful web service to provide advanced analytics for image management and manipulation within the Ozone Widget Framework.

RESEARCH EXPERIENCE

- JAN 2016 - MAY 2016 | **Audio Based Material Classification for Sorting Waste**
Advised by Dr. Gilmer Blankenship, University of Maryland
- Produced a patent pending solution for Union Paper Mills in the UAE.
 - Worked with 2 colleagues to research signal processing and machine learning techniques for material classification based on an object's acoustic signature.
- AUG 2013 - DEC 2015 | **Human-Computer Interaction Lab**
University of Maryland, Undergraduate Research
- Used images from Google Street View to locate sidewalk accessibility issues.
 - Visualized sidewalk accessibility issues by designing, developing and evaluating multiple form factors of an accessibility-aware mobile navigation system.
 - Used OpenCV to improve sidewalk detection rates.

ADDITIONAL ACTIVITIES

Hackathons

SEPT 2013

MHacks: First Place Overall

- Worked with 2 colleagues in 36 hours to design, create and code a single stream recycling bin that sorts recyclable and non-recyclable materials.

APRIL 2014

Bitcamp: Microsoft Awarded Best Hack

- Spent 36 hours independently designing and creating a web service for real-time translation of SMS messages between two phones.

SEPT 2012 -

MAY 2013

Engineers Without Borders

University of Maryland, Peru Water Purification Project

- Investigated, designed and implemented a water purification system within a remote town in Compone, Peru.
- Selected, with 5 other undergraduate students out of a group of 70, to travel to Compone and conduct research on the water distribution system.