

Maxwell J. Morgan

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EDUCATION

University of Michigan College of Engineering

Graduation May 2018

Bachelor of Science in Engineering – Computer Science & Data Science

- GPA: 3.65 / 4.00
- Relevant Courses: Algorithms & Data Structures, Computer Architecture, Computer Security, Java Programming, Web Systems, Operating Systems
- Awards: Dean's List and University Honors, 3 semesters

WORK EXPERIENCE

FACEBOOK – *Software Engineering Intern – Wormhole Team*, Menlo Park, CA **May 2017 – August 2017**

- Developed a property framework capable of dynamically configuring a distributed publisher-subscriber system during runtime eliminating required downtime of the system by 100% in most scenarios
- Migrated a user's cache invalidation service to the newest version of subscriber library reducing CPU load and memory usage of over 500 application instances and reducing cache invalidation latency
- Implemented subscriber-side checkpointing to a publisher-subscriber style, real-time data stream diminishing the window size of stale data retransmission by up to five minutes
- Offer to return

FICO – *Software Engineering Intern*, Ann Arbor, MI

May 2016 – May 2017

- Designed and implemented a distributed messaging system using RabbitMQ allowing system applications to communicate and reducing latency by up to 24 hours
- Developed and maintained a distributed system dedicated to active network probing providing approximately 45,000 data points each week
- Designed and constructed network probes to discover Web servers exposed to HTTPS-related vulnerabilities adding 3 active probes to FICO's current set
- Offer to return

Merit Network, Inc. – *Research Assistant*, Ann Arbor, MI

Sept. 2014 – April 2016

- Programmed a machine learning algorithm in Python to predict electricity consumption in smart-homes
- Designed and implemented a network of ZWave-based wireless sensors and Raspberry Pi's to collect real-world measurements within a smart-home
- System administrator of 5 Red Hat and Debian based Linux systems
- Database administrator for MySQL and graphite databases
- Offer to return

ACTIVITIES

Girls in Electrical & Computer Science – *Member & Web Master*

Jan. 2016 – Present

- Volunteered to teach 30 high school women introductory programming
- Responsible for the GEECs website including website architecture and adding content and features

Wolverine Cybersecurity Capture the Flag – *Team Member*

Sept. 2016 – April 2017

- Participated in 5 capture the flag cybersecurity challenges performing web exploits and binary exploits

SKILLS

- Proficient in C++, Python, Bash, SQL, git, mercurial, Vim
- Comfortable with Java, HTML, CSS, Javascript, LaTeX, PHP
- Experienced in Linux administration, Raspberry Pi's, networking fundamentals, SSL/TLS, security, database and website administration, Python Flask, C++11, C++14