Maxwell J. Morgan

✉ mjmor@umich.edu | ✆ (586) 610-7410 | ⚲ maxwelljmorgan.net | ⊕ github.com/mjmor

EDUCATION

University of Michigan College of Engineering
Graduation December 2017
Bachelor of Science in Engineering – Computer Science

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

WORK EXPERIENCE

University of Michigan – *Web Systems Teaching Assistant*, Ann Arbor, MI   **September 2017 – Present**

- Taught a class of 30 students concepts and practices in web systems including web site design (ReactJS and Python Flask), networking, web security, information retrieval, and distributed systems
- Held weekly office hours to work one-on-one with students and help them better understand class concepts, finish class projects, and prepare for exams
- Created an automated test suite to grade students' client-side dynamic websites using Selenium, Chrome headless, and Python unittest framework
- Wrote exam questions on the topics of front-end development (ReactJS) and information retrieval (Page Rank) to test student performance in the class

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 user 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

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

ACTIVITIES

Girls in Electrical Engineering & Computer Science – *Member & Web Master*   **January 2016 – Present**

- Taught 30 high school women in southeastern Michigan introductory programming with Python
- Developed and maintained the GEECS organization website; a server-side dynamic website built using Python Flask, MySQL, Bootstrap, and Cosign authentication

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, ReactJS, C++11, C++14