

Melissa George

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EDUCATION

University of Michigan

Ann Arbor, MI

B.S. Computer Science & Mathematics

Expected — April 2019

- Computer Science concentrations in Software Systems and Computer Security; Mathematics concentration in Discrete & Algorithmic Methods
- Relevant Coursework: Operating Systems, Computer Architecture, Computer Security, Algorithms, Data Structures, Cryptography, Discrete Mathematics, Theory of Computation, Graph Theory & Combinatorics, Probability, Statistics, Linear Algebra, Analysis, Calculus I-IV
- University Honors, all semesters; James B. Angell Scholar, March 2018
- GPA: 3.835

EXPERIENCE

CME Group

Chicago, IL

Software Engineering Intern

May 2018 - August 2018

- Worked on the Identity and Access Management team, learning about the security principles involved and the enterprise applications used to manage identity and protect information
- Wrote PowerShell scripts for disabling dormant accounts and creating and updating groups in Active Directory and in eDirectory; these scripts helped to identify thousands of dormant accounts and to create hundreds of groups
- Built a SailPoint workflow for guiding new employees in requesting access to applications using BeanShell
- Updated the webpage displayed when users are prompted to authenticate via Duo 2FA
- Developed PowerShell scripts to add application IDs, create safes, modify safes, etc. in CyberArk via the CyberArk REST API

EECS 280 — Programming & Data Structures

Ann Arbor, MI

Instructional Aide

September 2017 - April 2018

- Reinforced concepts from lecture including C and C++ style abstract data types, inheritance, polymorphism, arrays, linked lists, binary search trees, recursion, and exceptions
- Demonstrated the use of software development tools like Git, gdb, Make, Valgrind, and IDEs
- Taught a weekly lab section, held office hours, helped to write and grade exam
- Served as the social chair-- planned social events for staff throughout the semester

CME Group

Chicago, IL

Software Engineering Intern

May - August 2017

- Collaborated with an Agile development team to transition a legacy web application from GWT to AngularJS

- Improved previously implemented error-handling methods in JavaScript
- Debugged Java code to correct errors
- Constructed complex SQL queries

UM Academic Success Program

Ann Arbor, MI

Math & Computer Science Tutor

September 2016 - April 2017

- Helped students to develop their mathematical intuition and algorithmic thinking skills
- Taught students to program, test, and debug simple programs in MatLab & C++

UM Departmental Computing Organization

Ann Arbor, MI

Computer Consultant

July - August 2016

- Performed troubleshooting of technical issues for EECS students and faculty
- Learned myriad skills relating to Bash scripting, system administration, and hardware

PROJECTS

Commodity Analytics Dashboard

July, 2018

Collaborated on a team of eight in CME Group's "CodeUp"—a 32-hour hackathon where interns were challenged to build data visualization tools. Implemented a dashboard for visualizing market data trends using React and Highcharts, which won second place overall.

Network File Server

April, 2018

Worked on a team of three to implement a network file server which serviced requests from clients to create, modify, read, and delete files. The server listened for messages from clients, parsed and validated requests, serviced requests, and returned messages to clients. Learned about networking protocols, file systems, and programming with sockets.

Thread Library

February, 2018

Worked on a team of three on a thread library which handled concurrent programs running on multiple processors. Learned about concurrency, mutex locks, and condition variables.

Assembler/ Linker Simulator

October, 2017

Implemented a program which simulated the assembly and linking steps of compiling programs written in a toy assembly language.

Sudoku Solver

April, 2017

Wrote a program which solved Sudoku puzzles using a backtracking algorithm.

SKILLS

Programming Languages

Expert: C, C++

Intermediate: Python, PowerShell, Bash, HTML/ CSS

Beginner: Java, JavaScript, SQL

Development Tools

Git, gdb, Valgrind, Make, Xcode, Eclipse, PowerShell ISE