

SOPHIE SMITH

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EDUCATION

Carnegie Mellon University

M.S. in Computer Science

Expected December 2021

B.S. in Computer Science

Concentration in Computer Systems
GPA: 3.46/4.00
Expected December 2020

Saratoga Springs High School

High School Diploma, June 2017

RELEVANT COURSEWORK

Operating Systems (15-410)
Storage Systems* (15-746)
Computer Architecture* (15-740)
Computer Networks* (15-441)
Parallel Computer Architecture and Programming (15-418)
Introduction to Security (15-330)
Software Foundations of Security and Privacy (15-316)
Algorithm Design and Analysis (15-451)

* In Progress (Fall 2020)

SKILLS AND ABILITIES

Languages:
(Proficient) C, Python
(Familiar) C++, Matlab

AWARDS & ACTIVITIES

Dean's List (Spring 2019, Fall 2019)
Women @ SCS Committee, 2017-2019
Presidential Rotary Scholarship Recipient (2017)

PROJECTS

Parallel Object Tracking

- Implemented object tracking via Lucas-Kanade optical flow algorithm for 15-418 final project
- Used OpenMP, MPI and CUDA frameworks to increase speedup to up to 27x

INDUSTRY EXPERIENCE

Software Engineering Intern

Microsoft (May 2020 - August 2020), Remote

Media Pipeline and Codecs Team, Silicon, Graphics & Media Org.

- Used Keras to implement deep learning models to learn features about users in video conferencing applications
- Developed a webcam to video display pipeline using Media Foundation to test real-time performance and model accuracy
- Optimized pipeline by eliminating unnecessary copies and adding asynchronous task execution to limit video rendering delay

Explorer Intern

Microsoft (May 2019 - August 2019), Seattle

System Center Configuration Manager Engineering Team

- Implemented various accessibility and UI improvements for System Center Configuration Management software to aid OS Deployment tasks performed by Windows IT Administrators
- Shipped four features to allow search and filtering of Task Sequence Editor steps and assistance in modifying conditionals

ACADEMIC EXPERIENCE

Teaching Assistant @ Carnegie Mellon University

Introduction to Computer Systems, 15-213/18-213/18-613/15-513 (Spring 2019, Fall 2019, Summer 2020)

- Led recitations for graduate and undergraduate students to help teach fundamentals of computer systems
- Held office hours to help students with course assignments and conceptual understanding of the course material
- Wrote exam questions for midterm and final exam

Research Assistant @ Carnegie Mellon University

Optimization, Probability and Learning Lab
(December 2019 - July 2020)

- Worked on optimizing distributed machine learning computations on serverless computing platforms
- Used error-correcting codes to mitigate the effect of straggling workers

Center for Computational Analysis of Social and Organizational Systems (May 2018 - June 2019)

- Predicted users likely to propagate fake information across Twitter using label propagation and graph-based convolutional neural networks
- Improved algorithm by forming a network of users via mentions, retweets, quotes and replies and by analyzing tweet meta-data included in their posts

CREATE Lab (September 2018 - May 2019)

- Transcribed interview videos from artificial intelligence professionals to create a virtual archive of their opinions on the social ramifications of developments in this field
- Helped create a virtual archive of videos for public distribution (aiandhumanity.org)