Ashton Sopher

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Education

Codecademy, *Career Path: Full Stack Web Developer.*

2017-2021 **University of Rochester**, *Double Major: Computer Science and Mathematics*, **GPA: 3.42**.
Jesse L. Rosenberger Prize (2019)

Experience

2020 **Department of Computer Science**, *Research Assistant*, University of Rochester.
Worked with a faculty member in collaboration with researchers from the University of Rochester Medical Center to develop a secure multi-party computation cryptographic system for sharing sensitive genomics data for cancer research.
Used Genome Analysis Toolkit, Picard, and Java.

2020 **Department of Computer Science**, *Teaching Assistant*, University of Rochester.
Social Implications of Computing
Guided students in discussions to develop their ideas and understanding of ethics and their moral responsibilities as future engineers. Also aided the professor in grading and running class smoothly.

2019 **WINLAB**, *Intern*, Rutgers University.
Radio Spectrum Characterization
Designed a system to collect spectrum usage from a wireless testbed and applied machine learning to predict future usage and to extrapolate network data.
Used software-defined radios, long short-term memory neural network, and PyTorch.

2018 **WINLAB**, *Intern*, Rutgers University.
IoT Cybersecurity - Red Team
Worked with four other students to develop and execute several attacks against a Blue Team's Internet of Things system. Successfully ran jamming and sniffing attacks.
Used Bluetooth peripherals, software-defined radios, and Wireshark.

Relevant Courses

Computer Science — Cryptography, Data Structures and Algorithms, Computer Architecture, Social Implications of Computing, Design and Analysis of Efficient Algorithms, Topics in Cryptography, Computational Statistics, Database Systems, Computer Security

Mathematics — Multivariable Calculus, Discrete Math, Linear Algebra with Differential Equations, Linear Algebra, Number Theory, Abstract Algebra, Graph Theory, Topology, Real Analysis, Differential Geometry

Skills & Languages

Proficient — Java, Python, Javascript, HTML, CSS, Git, Linux, R
Some — C, SQL, MATLAB, Ruby
Native — English, French
Learning — Spanish, Turkish