

# Griffin P. Knipe

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Cambridge, MA 02139

## Education

### Northeastern University

Boston, MA

Candidate, MS in Electrical & Computer Engineering

Expected May 2021

GPA: 4.0

Courses: Computer Architecture, Computer Systems, Hardware & System Security,  
Software Security, Machine Learning

### Northeastern University

Boston, MA

BS in Computer Engineering with a Minor in Mathematics

May 2019

GPA: 3.8

Honors: IEEE-Eta Kappa Nu, Dean's List Fall 2014-Spring 2019

## Research and Work Experience

### Northeastern University

Boston, MA

*Draper Fellow*

Sep 2019 - Present

- Developed a microarchitectural simulation of a single-issue out-of-order RISC-V pipeline in an event-driven simulation framework for architecture design exploration.
- Developed a RV64I ISA emulator intended for simulation fast-forwarding and ISA feature testing.
- Studied translation of microarchitectural models to formal verification DSL for transient execution side-channel attack detection.

### The Charles Stark Draper Laboratory

Cambridge, MA

*Engineering Intern; 4 separate internships*

Jan 2017 - Aug 2019

- Assisted in designing and debugging a GPS signal processor on Xilinx FPGA.
- Improved runtime performance and debugged model accuracy issues in real-time Simulink models.
- Developed a build automation tool for Simulink projects to standardize the configuration processes among a team of engineers and ease the integration of multiple models.
- Developed a tool for building, managing, and version controlling Vivado projects to automate IP regression testing.

### Starry Inc.

Boston, MA

*Engineering Intern; 2 separate internships*

Jan 2018 - May 2019

- Supported development and maintenance of an automated production test suite for wireless network infrastructure devices.
- Diagnosed and repaired manufacturing defects that were detected by production tests to improve product yield and suggest improvements to manufacturing processes.

## Technical Skills

Programming: Go, Python, C, Bash, RISC-V assembly  
Software: Git, Subversion, Linux, Docker, Vivado, Simulink  
Test Equipment: Oscilloscope, DMM, Litepoint, spectrum analyzer