ANDREW R. REILLEY

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EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA. *2019*
Bachelor of Science in Electrical Engineering and Computer Science, Course 6-2

Classwork Circuits and Electronics · Communication Networks · Signals and Systems
Computer System Engineering · Microcontroller Project Lab · Computer Vision
Machine Learning · Security and Cryptography · Robotics

TECHNICAL EXPERIENCE

Programming	Python · C++ · Assembly · Arduino · OpenGL · GLSL · Qt · PSQL · Javascript Node · Vue · Rust
Hardware	3D Printing · Circuit Design and Fabrication · Solidworks

WORK EXPERIENCE

Markforged Summer 2017/2018, Present
Software Engineer

- Developed auto-nesting algorithm for efficiently packing parts on print beds.
- Implemented print recovery system to allow printers to restart interrupted prints after errors.
- Created release automation tool that integrates with issue tracking software and version control system to expedite the release process.
- Worked on a two-person team to create a framework for rapid development of the front- and back-ends of web services for new products.

Caron Engineering 2016
Software Engineering Intern

- Added new analysis tools to the company's sensor-monitoring application.
- Developed user interfaces with Qt and C++.

Plixer International 2014/2015
Software Engineering Intern

- Helped transition the company's product from one database engine to another.
- Designed tests and programmed tools to evaluate database query performance.
- Helped with quality assurance for a major release.

PROJECTS

openMotor: Developed a cross-platform GUI application for designing and simulating solid rocket motors that is used by several college rocket teams and receives code contributions from other users.

RMTS: Designed, manufactured, and programmed a circuit board that handles ignition and data logging for solid rocket motors. It is controlled wirelessly from a computer and streams results back.

Gameboy Emulation: Currently developing an emulator for the original Gameboy that can boot several games.

Microcontroller Tetris: Developed a fully-featured version of Tetris in 8051 assembly that outputs to a LED array.

Rocket Avionics: Led the MIT Rocket Team's avionics subteam as it developed and manufactured a system that logs and transmits information about a rocket's flight as well as controlling its recovery.

MASLAB: Worked with a small team to develop an autonomous robot capable of finding, navigating to, and stacking cubes based on color.

Fractals: Used GPU-compute techniques to generate high resolution fractal images in real-time.

High Powered Rockets: Built numerous rockets using composite materials that have flown to thousands of feet in altitude.

LEADERSHIP AND ACTIVITIES

MASLAB Director (2017-2018) · Vice President of MIT Rocket Team (2017-2018) - Avionics Team Lead for MIT Rocket Team (2015-2017) · National Association of Rocketry L3 Certified (2011-Present)