

# Matan R. Silver

SOFTWARE ENGINEER · ELECTRICAL ENGINEER

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## Skills

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- Software:** Python, Tensorflow, Keras, C, C++, Golang, Java, SQL, JavaScript, TypeScript, Electron, Angular, Unix, Linux, MATLAB, LTSpice, Altium,  $\LaTeX$ , HTML, CSS, Django
- Hardware:** Soldering, Breadboarding, 3D Printing, Laser Cutting, CNC Milling, Circuit Design, CAD, Woodworking, Oscilloscopes

## Work Experience

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### MathWorks

*Natick, MA*

SOFTWARE ENGINEER (MATLAB TO C/C++ COMPILER)

*Jul 2021 - Present*

- Migrated a code-generation readiness tool to a modern C++ backend
- Collaborated with technical support to address bugs and feature requests affecting user workflows

### MathWorks

*Natick, MA*

APPLICATION SUPPORT ENGINEER

*May 2020 - Jul 2021*

- Handled customer support cases related to the MATLAB and Simulink products, and wrote public facing code generation knowledge articles
- Wrote a Java library to communicate with the Gremlin API, used with Gatling to conduct chaos engineering tests
- Wrote an AST matcher in C++ to classify parallel loop variables in MATLAB
- Wrote a migration routine in Golang to aggregate customer usage data and present it in a PowerBI dashboard for internal research purposes
- Wrote static analysis tools using Clang LibASTMatchers, and a peephole optimization for MATLAB intermediate representation

### AllSpice IO

*Boston, MA*

SOFTWARE ENGINEERING INTERN

*Jun. 2019 - Jun. 2019*

- Used TypeScript, Angular 7, Electron, and Python to create a desktop app to facilitate hardware engineering project management
- Conducted code reviews, and coordinated with management to negotiate features to be delivered

### Bluefin Robotics (General Dynamics Mission Systems)

*Quincy, MA*

ELECTRICAL ENGINEERING COOP

*Jan. 2018 - Aug. 2018*

- Designed, fabricated, and tested a PCB and cable harnesses in Altium to reduce QA time for common internal cables by >90%
- Adhered to military standards for engineering practices and documentation of design (e.g. Lead and conducted peer reviews on schematics)

### Desktop Metal

*Burlington, MA*

HARDWARE RESEARCH & DEVELOPMENT COOP

*Jan. 2017 - Jun. 2017*

- Designed and built test fixtures and test scripts for sensors being considered for the metal 3D printers
- Ran and maintained a fleet of metal 3D printers
- Used Altium to design circuits, and built up a part library

## Education

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### Northeastern University

*Boston, MA*

MASTER OF SCIENCE IN ELECTRICAL AND COMPUTER ENGINEERING

*May 2020*

- GPA: 3.875/4.0
- Concentration in Communications, Controls, and Signal Processing. Coursework included: Feedback Control Systems, Image Processing and Pattern Recognition, Digital Signal Processing, GNSS Signal Processing, Applied Probability and Stochastic Processes, Statistical Inference, Microelectromechanical Systems, Electronic Materials

### Northeastern University

*Boston, MA*

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

*May 2020*

- GPA: 3.888/4.0
- Capstone Project: Worked in a team to create a system for wirelessly controlling audio effects in real time. Designed a high-fidelity headphone driver circuit in Altium. Simulated small signal performance using LTSpice. Wrote firmware in C for two ESP-32 coprocessors. Won both the Capstone competition and a publication in IEEE The Bridge