

William Makinen

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EDUCATION

Princeton University: Master's in Engineering
M.Eng in Mechanical and Aerospace Engineering

May 2023

Princeton University: Bachelor's of Science in Engineering; GPA: 3.66
B.S.E. in Electrical and Computer Engineering, Computer Science and Robotics Certificates

May 2022

EXPERIENCE

Brilliant Smart Home, San Mateo, CA
Hardware Team Electrical Engineer

Summer 2023-Present

- Working with the hardware team to design, prototype, test, certify, and manufacture electronic smart home devices.

Brilliant Smart Home, San Mateo, CA
Hardware Team Intern

Summer 2022

- Improved upon Brilliant's hardware products as core member of the hardware team.
 - Researched and implemented doppler radar motion sensor candidates as an alternative to PIR technologies for use in the Brilliant Control.
 - Developed a battery-powered Brilliant Control for use as a demo unit.

E3D-Online, Oxford, UK
Intern

Summer 2021

- Designed, developed, and tested FDM 3D printing extrusion systems as part of the engineering team.
- Built internal testing rigs and developed accompanying test procedures for company products and prototypes.

OPEX Corporation, Moorestown, NJ
Electrical Engineering Intern

Summer 2019 & Summer 2020

- 2020: Worked in Incoming and Scanning Division on variety of circuit design and embedded systems projects.
- 2019: Worked in Warehouse Automation Division to streamline and automate final QC process for SSXL iBots.

U.S. Naval Research Laboratory, Washington, DC
Student Researcher

Summer 2017 & Summer 2018

- 2018: Experimented with the 3D printing of technical ceramics as an alternative fabrication method to previous year's work.
- 2017: Worked in Optical Sciences division to construct a binder-jetter 3D printer capable of forming technical ceramics into complex shapes.

Intel International Science and Engineering Fair (ISEF), Pittsburgh, PA and Los Angeles, CA
ISEF Finalist

May 2017

- Developed fully autonomous system for detecting and correcting errors during the 3D printing process. Received 4th place in Engineering and Mechanics category at international fair.
- US Patent Application Granted:** US Patent No. 11,084,091.

ACTIVITIES

3D Hubs

3-4 hours per week

Hub Operator

- Print and ship parts submitted by customers through 3DHubs for a fee with design services provided as needed.

West Valley Track Club
Athlete

12-15 hours per week

- Compete in track, road, and cross country races, attend workouts/practices, and volunteer at club events/races.

SKILLS

Python, C/C++, Java, MATLAB, Linux Systems, Circuit Design and Simulation, PCB Design and Layout (Altium Designer), Verilog and FPGA, CAD (SolidWorks, Inventor/Fusion360), G-Code and CNC Devices, Oscilloscopes, DMMs, Signal Generators, Workshop Tools, and General Making.