William Makinen

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EDUCATION

Princeton University: Master's in Engineering; GPA: 3.7
M.Eng in Mechanical and Aerospace Engineering *Expected May 2023*

Princeton University: Batchelor'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 *Summer 2022*
Hardware Team Intern

- 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 *Summer 2021*
Intern

- 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 *Summer 2019 & Summer 2020*
Electrical Engineering Intern

- 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 *Summer 2017 & Summer 2018*
Student Researcher

- *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 *May 2017*
ISEF Finalist

- 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

Princeton 3D Printing Club *2-4 hours per week*
President

- Rebooted educational club intended to allow both novices and experienced users to explore 3D printing.
- Coordinated workshops to teach 3D printing skills and allow students to become certified on club's 3D printers.

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.

Princeton Running Club *12-15 hours per week*
Assistant Coach, Race Coordinator, Top 7 Competitive Athlete

- Plan Workouts with head coach, modify to suit individual needs of runners.
- Organize and schedule team races; payment, event entries, transportation, and lodging.

SKILLS

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