SANTIAGO HIRSCHMANN

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Apple
06/2021 – 09/2021
iPhone Product Design Intern
- Led the investigation of a novel manufacturing technology by collaborating closely with suppliers in China
- Presented the results of my work to the entire iPhone PD team and executives
- Worked with a team of 4 to develop a new product concept and pitched our idea to senior executives as a top 10 finalist in the annual, companywide competition
- Peer reviewed and edited detailed drawings for parts entering mass production
- Designed parts with Nx and used Teamcenter to maintain a tight product development timeline

Infinite-Cooling
01/2021 – 06/2021
Mechanical and Systems Engineering Co-op
- Developed a data acquisition system using a Raspberry Pi running python
- Led the initial design, testing, drawing, and initial production a critical subsystem of the product
- Produced drawings for contract manufacturers to kick off production of structurally integral parts
- Employed machine shop equipment and rapid prototyping capabilities to quickly design and build a full-scale mockup of the first ever water reclamation system for power plants

Drone Dynamics Lab
10/2019 – Present
Student Researcher
- Optimized and tinkered with MATLAB simulations of drone dynamics to study PID controllers

SharkNinja
01/2020 – 08/2020
Mechanical Engineer and Robotics Co-op
- Took charge of the design, verification, and implementation of a design change in the air path of a robotic vacuumto solve a critical consumer facing problem
- Defined a quantitatively verifiable problem statement from a vague, qualitative design brief and then created a test protocol to accurately simulate the above problem
- Leveraged 3D printing, machine shop access, and lab equipment to produce ≈40 prototypes, successfully iteratedon the design and then validated and implemented a solution
- This solution reduced clogging by 82% and would save consumers an average of 90 seconds per week
- Designed an injection molded snap-fit solution with the potential to save the company $75,000 annually in manufacturing costs after analyzing the robot design using DFM and DFA software

Smart Mobility Group
01/2019 –12/2020
Student Researcher
- Co-author of "Transportation Network Company Service Usage in the University Community" presented at the Transportation Research Board's Annual Meeting in Washington DC
- Acquired funding for, marketed, and implemented a survey of 2500 people to research the use of Uber and Lyft by college students and professors and then analyzed the data extensively

Team Engineering Projects
09/2018 – Present
Student
- Designed, programmed, and built a wearable device that used a pulse oximetry sensor to detect when a user was drowning and alert bystanders by releasing a bright dye into the water to aid in rescue
- Designed a hydrokinetic driven device that can transport and filter water for users without drinking water

Education

Northeastern University
May 2022 | **GPA: 3.56**

Degrees:	Master of Science in Mechanical Engineering with a concentration in Mechatronics Bachelor of Science in Mechanical Engineering, Minor in Mathematics
Activities:	Northeastern Sailing Team: Vice President (3 terms), Treasurer (2 terms), Co-Captain (1 term) Beta Gamma Epsilon Engineering Fraternity: President (1 term), House Repair Chair (5 terms)
Software:	NX, Solidworks, MATLAB, Creo, Python, C++, Confluence, Microsoft Office, Ansys Fluent
Skills:	Design R&D, DFM, DFA, product development, power and hand tools, mills, lathes, additive manufacturing, DFMEA analysis, wiring and soldering, design validation

Volunteering:	Ski Patroller at Okemo Mountain, Boston Marathon, Head of the Charles, Pilgrim Church
Hobbies:	Skiing, rock climbing, hiking, camping, home repair, biking, cooking, tinkering, reading