



ANDRÉS WITZKE

Product Design Engineer

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Portfolio: <https://awitzk.github.io>
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Experienced, innovative product design engineer who combines human-centered design with technology to develop products and experiences that can help shape the future. Previous experience ensures a high level of business awareness as well as sound knowledge of mechanical engineering. Seeking a dynamic role in an innovative firm with opportunities for growth.

Design: Experience Prototyping, Design Process, Proof of Principle, R&D, Human Centered Design, User and Market Research, Ethnographic Research, User Testing, Iterative Design, Sketching, CAD Modeling, FEA Analysis, Design for Manufacturing and Assembly, 3D Printing, Milling, Laser Cutting, Technical Drawing, Microcontrollers, Soldering.

Software & Programming: NX, Creo, SolidWorks, ANSYS, SAP, Fusion360, Adobe InDesign, Rhino/Grasshopper, C++, HTML, MATLAB, Python, Max8, Ableton.

Professional: Project Management, Collaboration, Procurement, QA, Agile, Leadership, Budgeting, Scheduling, Risk-Assessment and Mitigation Planning, Stakeholder Communication, Negotiation.

Timeline

- Sept 2020 **MSc. Product Design Engineering (Distinction)** **The Glasgow School of Art, UK**
Exercised the human-centered design process and deepened ideation, prototyping, testing and DFMA skills through a variety of school and personal projects.
- July – **Designer (Freelance)** **Wild Flag Studios, NY, USA**
Sept. 2019 Designed, budgeted, and procured components for a kinetic outdoor art installation.
- July 2017 – **Jet Engine Development Engineer** **Pratt & Whitney, CT, USA**
July 2019 Led the redesign of critical rotating hardware by managing a team, assessing risks, reacting iteratively to data and working with suppliers. Modelled and analyzed engineering changes, drafted technical drawings.
- May 2017 **BS. Mechanical Engineering (Cum Laude)** **Boston University, MA, USA**
Studied engineering fundamentals, developed design, manufacturing, software, critical thinking and interpersonal skills.
- Jan. – **Product Development Co-Op** **Fractyl Biomedical Laboratories, MA, USA**
May 2017 Developed a new manufacturing process by ordering machinery, creating a QA process, designing and prototyping fixtures and assimilating the operation into the assembly line.
- June – **Product Design Intern** **MassChallenge Startup Accelerator, MA, USA**
Nov. 2016 Designed, developed and tested prototypes and product components for multiple early-stage startups through CAD modelling, 3D printing, laser cutting, CNC machining and silicone casting.

Product Design Engineering Projects

- June – **Contact: a non-verbal communication platform** **The Glasgow School of Art, UK**
Aug 2020 Devised a novel communication device, built a working prototype using a combination of sensors and feedback mechanisms such as heating cells and haptic motors. Conducted user tests to prove the concept and collect feedback for future iterations. **Key Skills Demonstrated:** Design Process, R&D, CAD, 3D Printing, Innovation, Experience Prototyping, Microcontrollers, User Testing, Communication.
- April – **The Ventus Project** **The Glasgow School of Art, UK**
July 2020 Developed an auditory display tool that pulls live weather conditions from two separate APIs and turns the data into a generative song using Max8 and Ableton. **Key Skills Demonstrated:** Medium-agnostic Design, Human Computer Interaction, Generative Design, API Programming, User Testing, Machine Learning.
- March – **AmpSusan** **The Glasgow School of Art, UK**
July 2020 Designed a subtle, communal way to adjust the volume of audio systems with a functional coffee table. Prototyped the concept under lockdown and proved the principle with a variety of user tests. **Key Skills Demonstrated:** Experience Prototyping, Resource Management, A/B Testing, Iterative Design.