



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 that build a sustainable relationship with their users. Previous experience ensures a high level of business awareness as well as sound knowledge of mechanical engineering. Seeking a dynamic role in a design firm with opportunities for growth.

Skills

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 and DFMA skills.	
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 sound 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.	