

Cole Brauer

PO Box 4134, Mesa, AZ 85211
cbrauer@asu.edu | (480)-522-6917

Education

Arizona State University, MS Engineering, GPA: 4.0

Expected Graduation May 2020

Arizona State University, BSE Engineering (Robotics), GPA: 4.0

2015 - 2019

- Summa Cum Laude
- Barrett, the Honors College
- Grand Challenge Scholar
- Moeur Award

Professional Experience

Independent CAD and Prototyping Consultant

September 2015 – Present

Worked with inventors to create prototypes and presentation tools for their inventions. This could include helping them finalize their design, creating CAD models for manufacturing, 3D printing prototypes, building websites, and making animations for advertisements and presentations.

Client projects:

- Freshwater Systems – 3D Concept art and animations, Informational videos
- PodPurse – CAD modeling and 3D printing
- Precise Meds – CAD modeling and 3D printing, Prototype assembly
- Roller Wringer – CAD modeling, Promotional animation
- Nighthawk Products – CAD modeling and 3D printing
- Ornamagic – Instructional animation
- Other confidential projects

Robotics Engineer at Make-A-Pede

January 2017 – Present

Co-founded a company that creates educational robotics kits which are suitable for a wide range of skill levels.

Undergraduate Teaching Assistant at Arizona State University

August 2018 – May 2019

Worked as a UGTA for an Embedded Systems Design course at ASU. Attended classes and held office hours to help students with electronics design, software design, and prototype construction. Led lectures on Cadence PCB design software and circuit troubleshooting. Managed class discussion board.

Key Achievements:

- Provided feedback and assistance to student teams on a regular basis
- Helped teams overcome specific major challenges with their projects
- Gained experience presenting successful lectures and workshops
- Worked with faculty to improve the value of the course to students

Grader at Arizona State University

August 2018 – November 2018

Worked as a grader for an Engineering Mechanics course at ASU. Attended classes to collect work and proctor exams. Graded homework assignments and exams. Provided assistance to students when needed.

Leadership Highlights

- Leading development of the Make-A-Pede, an educational Arduino-based robotics platform
- Co-leading a Venture Devils startup developing mountain biking accessories
- Technical director for a Global Leadership Summit site, 2018-2019
- Led/presented at various robotics camps and workshops
- Mentored multiple high school VEX teams
- Served as head referee at several VEX Robotics Competition events
- Led an eSeed venture developing workshop safety products
- Co-led a semester-long Make course for a local homeschool group
- Led a CAD seminar at Scottsdale Community College

Technical Skills

Software: Autodesk Inventor, Solidworks, Fusion 360, Onshape, Blender, MS Office Suite, Corel Draw, Inkscape, HTML/CSS, Python, Matlab, Simulink, Cadence, Eagle, Multisim, HitFilm

Electronics: Circuit Design, PCB Fabrication, Soldering, Oscilloscope, Arduino, PSoC

Shop Equipment: Laser Cutter, 3D Printer, Mill, CNC, Welding, Machine and Wood Shop Tools

Team Project Highlights

VoxelFuse: Leading development of a software toolkit for processing multi-material 3D models

Drone-mounted Vaccine Dispenser: Assisted in developing a module for launching animal vaccine pellets

Laminate Quadrotor: Developed a foldable quadrotor capable of changing its propeller geometry

Electronic Game Scorepad: Developed an electronic scorepad for board games

Smart Mirror: Developed an internet-connected mirror display

Robotics Exhibit for the AZ Science Center: Designed an exhibit to teach the engineering design process

CNC Router: Constructed a custom fully-enclosed CNC router from scratch.