

HOPE MADISON CHAMBERS

Computer/Electrical Engineering Student at The University of Oklahoma

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- Over 200 hours of experience in 3D design and prototyping
- Experience with NI Multisim and KiCad software
- Hands on skills with laser engraving and software
- Educated in Java and Python
- Experienced working on a variety of diverse project teams
- Strong design skills creating presentations and documentation for 3D models and proposals
- Variety of robotics projects utilizing several sensors and microcontrollers
- Extensive practice with credit card size computers including Raspberry Pi and Arduino
- Trained in a variety of digital modeling software such as SolidWorks and Autodesk Revit
- Knowledgeable with designing and creating custom PCBs (Printed Circuit Boards)
- Stick welding experience
- Strong understanding of correct documentation of projects in an engineering notebook

Experience

Fabrication Specialist Tom Love Innovation Hub Fabrication Lab, University of Oklahoma

- Support and advise engineering and non-engineering students alike with the skills to create their prototypes.
- Identify problems within the lab and work individually or with a diverse team of different majors to design, prototype and implement projects using a variety of tools including 3D printers, laser engravers, circuitry, PCB, wood working, and more.
- Design and prototype an attachment for 3D printers that uses normally open and closed on limit switched to sense when the printer has a jam or is out of filament.
- Design and build a custom wooden shelf for vinyl cutting material storage and access using SolidWorks and CNC machining, table saw and more wood working tools to prototype.
- Identify, justify and recommend new fabrication parts needed to leadership.

Architectural Design Services CDBL Construction, Lawton, Oklahoma

- Work alongside professional drafters taking written, and verbal specifications and converting them into presentations and blueprints to be used in construction.
- Designing building plans using drafting software, Autodesk Revit.
- Create detailed designs that consider ADA Laws, city regulations, and fire safety all while on a strict deadline.
- Design a new building for local homeless shelter with specific security features.
- Draft remodel to old creamery factory to be converted into a private military contracting testing facility with a covert SCIF.

Prototyping Design Contractor Cosmetic Specialty Labs, Lawton, Oklahoma

- Take verbal specifications and convert them into 3D models while keeping the users experience in mind
- Using SolidWorks and Autodesk Inventor to design 3D bath bomb models.
- 3D Print prototypes on a variety of printers including Markforged and MakerBot.

Involvement and Service (Over 1,000 hours)

Cerebral Palsy Symbiotic Robotics Research Assistant University of Oklahoma

- The robot assists babies with cerebral palsy by promoting crawling and walking.
- Using Arduino and other microcontrollers to test, program and implement a variety of IMU sensors to be used to move the robot when specific movement of the baby's arms and legs are sensed.

STEM Club Founder/ Teacher Bishop Elementary, Lawton Oklahoma

- Founded a unique STEM club at a local Title 1 elementary school to try and engage young engineers in a fun, hands-on environment.
- Taught students about the basics of computer science with activities that include programming, robotics, and more.
- Created a five-week curriculum that used the elementary hands-on programming tools.

Collaborative Engineering and Biomedical Project - Computer Engineer

- Assisted a biomedical student in creating a visual aid for his capstone project.
- Used a 3D printed robotic hand, Raspberry Pi and servo motors.
- Programmed in Python and controlled via keystroke commands.

Woman in STEM Event Speaker and Advocate Events vary

- Giving presentations to student, teachers and community members about either how to integrate STEM activities in the classroom, what is it like being a woman in STEM, and the importance of diversity in the work force.

Honors, Awards & Scholarships

2019 National Center for Women in Technology, National Winner

- First woman in Oklahoma to receive this award.
- The top 1% of applicants are selected to receive this award.
- Award recipients are selected based on their aptitude and aspirations in technology and computing, leadership ability, academic history, community outreach, and more.

2019 Oklahoma Mayor's Commission on the Status of Women Scholarship

- This scholarship recognizes local women who are advanced in their field and have high aspirations to break the gender gap in the work force.

2019 AXA Achievement Scholarship Recipient

- Received this scholarship based off the work I did creating a teaching a STEM club at a local Title 1 elementary school as well as my demonstrated leaderships skills, active community service, and academic standing.

2018 MakerBot Operator Expert Certification

- Certified to maintain and manage MakerBot 3D printers.