

XIAOYAO GAO

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EDUCATION

Rice University, Houston, TX

August 2017 – May 2021

Bachelor of Science in Mechanical Engineering with Engineering Design Minor

GPA: 3.87/4.0

Relevant Coursework:

- Multivariable Calculus
- Materials Science
- Thermodynamics
- Differential Equations
- Mechanics of Solids
- Fluid Dynamics

EXPERIENCE

Lab Technician

September 2018 - Present

Oshman Engineering Design Kitchen (OEDK), Houston, TX

- Assisted students with using engineering makerspace machines (3D printer, waterjet, plasma cutter, etc.)
- Monitored makerspace (~25 students present per shift) to maintain safety and organization
- Led workshops with 5-10 participants on basics of 2D drawing and laser cutting

Engineering Intern

May 2019 – August 2019

Barnes Aerospace, Windsor, CT

- Designed and modeled EDM electrode inspection fixture using Siemens NX, which was approved for production
- Created engineering drawing of electrode fixture for tool makers with proper tolerancing and GD&T notation
- Received basic training on metrology, metallurgy, lean manufacturing, and six sigma
- Created preliminary PFMEA (process failure mode element analysis) document on incoming 5-axis grinder
- Automated production tracker data entry using Excel VBA

PROJECTS

Educational Model for Brachial Plexus Palsy

September 2017 – May 2018

- Created a shoulder model for the Texas Children's Hospital to use in physical therapy treatment of infants with brachial plexus palsy, as part of Rice University's engineering design internship program
- Used fabrication tools such as SolidWorks modeling, 3D printing, and laser cutting to prototype product
- Documented design process, budget and spending, and prototype testing results
- Presented on team progress to Rice faculty, and delivered final product to client

For visuals of previous projects, see xiaoyaogao.github.io

TECHNICAL SKILLS

Software: SolidWorks, Siemens NX, Fusion360, Adobe Illustrator, Excel VBA

Programming: Python, MATLAB, C++

Fabrication: Additive manufacturing, hand/wood-working tools, CNC milling, some experience with lathes, welding, soldering, and molding/casting

LEADERSHIP

Rice Marching Owl Band – Personnel Manager

May 2019 - Present

- Trained and supported 9 section leaders in band with section recruitment and organization
- Acted as liaison between executive team and section leaders to communicate deadlines and needs
- Helped organize events for 50+ member band to improve club cohesion and retention