

David A. Yun

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EDUCATION

The University of Texas at Austin

Bachelor of Science in **Mechanical Engineering**
Minor in **Mandarin Chinese**

Summer 2020

GPA: 3.4/4.0

SKILLS

Software: SolidWorks, Creo, Ansys, Inventor, AutoCAD, Revit, Matlab, LabView, Python, Java, C++, Microsoft Office

Tools: 3D printer, Arduino, Metal lathe, CNC machine, Vertical milling machine, Laser cutter, Soldering iron, Power tools

Languages: Native in Spanish, Intermediate in Mandarin Chinese

EXPERIENCE

Schlumberger - Mechanical Engineer Intern | Houston, Texas

Summer 2019

- Redesigned and prototyped a downhole tool component to reduce manufacturing costs by over 30%, saving up to \$390,000 per year
- Redesigned a downhole tool cover to increase ease of use on the field
- Modeled redesign alternatives on Creo to visualize the feasibility of each design and submit them to drafting team
- Researched particle retention alternatives for the cover to keep sand and proppant out of tool and contacted suppliers to obtain samples for testing their reliability
- Conducted FEA simulations of hydraulic lines on Ansys to predict buckling and select optimal pipe diameters

Kasita - Product Design Fellow | Austin, Texas

Summer 2018 - Winter 2018

- Modeled a total of 96 intricate electrical and plumbing components on SolidWorks to be used on the complete assembly of a unit's 3D model
- Prototyped new actuation mechanisms for the redesign of the sofa/bed and stairs to increase ease of use
- Created engineering drawings of the electrical plan of the unit to be used in installation plans

Texas Inventionworks - Student Technician | Austin, Texas

Fall 2018 - Spring 2020

- Consulted with and assisted students on prototyping ideas to maximize efficiency and effectiveness
- Assembled, prepared, and repaired rapid prototyping machinery for optimal operation
- Certified students in safe and correct operational procedures for equipment and machinery

PROJECTS - Pictures and videos of my projects on DavidAYun.com/projects

High-Resolution Tribometer for Soft Materials - Senior Design Project

Summer 2020

- Collaborated with three other students to design a high-resolution microtribometer for use in a research laboratory
- Generated mathematical models of cantilever beams in bending to achieve the desired deflection, then conducted FEA simulations on Ansys to validate and revise the design
- Developed a removable enclosure for the tribometer to minimize wind and environmental interference
- Designed components for ease of manufacturing and assembly, resulting in a design 50% under budget which saves \$100,000 when compared to commercial alternatives

Gamebit (gamebitboard.com) - Founder, Product Development

Fall 2017 - Present

- Developed an automated chess board that allows a user to play against online opponents or AI in real time
- Conceptualized and built an embedded system consisting of a microcontroller, magnetic sensors, and stepper motors
- Wrote a program using C++ that interprets sensor signals and activates the motors

Golden Gate Bridge Replica - Personal Project

Fall 2015 - Spring 2020

- Researched engineering drawings and technical sketches of the Golden Gate Bridge
- Modeled and 3D printed 74 individual pieces that interlock to avoid adhering parts permanently
- Designed the bridge to exhibit cable tension and imitate the structural properties of the real bridge

Hyperloop Propulsion/Braking Test Sled - Guadalooop

Spring 2018

- Lead the design and assembly of a test sled in a period of 12 hours to maximize testing time
- Constructed a sled that allowed a motorized wheel to run along a special track to obtain propulsion and braking data for the final Hyperloop pod used in national competition