ANNA WEI

CONTACT

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SKILLS

SolidWorks experience through rocket payload design for the Waterloo Rocketry Design Team.

Familiarity with **GD&T, technical drawings,** and **FEA** on SolidWorks.

Refined **AutoCAD** and **rapid prototyping** skills through development of **laser-cut** projects.

Experience using **mill** and **lathe** to create a back-up steering system for a concrete toboggan competition.

Architectural design and surface modelling in **Google SketchUp.**

Developed mini-projects available on GitHub by coding in **C++, Python**, **HTML**, and **CSS**.

Bilingual in **English** and **Mandarin Chinese**.

EDUCATION

University of Waterloo

Candidate for Bachelor of Applied Science

September 2018 – June 2023

Mechanical Engineering, Honours, Co-operative Program

Relevant Coursework

Structure and Property of Materials – ME 115

Introduction to Mechanical Engineering – ME 101

Electrical Circuits and Instrumentations – GENE 123

ACHIEVEMENTS

Drafting and Design Level II

Academic Achievement Award 2016

Used Google SketchUp and AutoCAD to design house using architectural standards and created a fully rendered, animated walkthrough.

Constructed intricate, fully furnished cardboard model of the Sketchup house project by hand.

EXPERIENCE

Payload Structure Designer, Waterloo Rocketry Design Team

September 2018 – present

Optimized structure of CubeSat ferro-fluid experimental module while collaborating with other teammates to ensure design coherence with other parts of the payload.

Designed and created brace component of CubeSat with SolidWorks by following design constraints and criteria to house an experimental module.

Reduced rendering time of SolidWorks rocket payload model by creating assortment of simpler screws and utilizing design table of configurations to allow easy access to alternate screw sizes.

Junior Instructor, Geering Up UBC Engineering & Science for Kids

July 2018 – August 2018

Aided instruction of children aged 7-14 by promoting science and engineering topics through hands-on workshops while working with products and programs such as Adafruit and Scratch.

PROJECTS

Edge-Lit Acrylic Arduino Clock

December 2018 – Present

Inspired by the aesthetic of nixie tubes, this project will feature laser-engraved acrylic pieces that display numbers as an Arduino-controlled PCB of multiple LED's is shined through the edges of acrylic.

Laser-Cut Gear Car

December 2-23, 2018

Utilized AutoCAD to create CAD drawings and laser-cut prototypes to ensure proper fit of gears and wheel axes.

Finished wooden toy car product featured a figurine which was mobilized by the turning of the wheels on the car.

ACTIVITIES & INTERESTS

McMaster Designathon 2019

January 19 – 20, 2019

Conducted meta-analysis across several articles and existing research papers with teammates to research properties of lunar dust and its effects on current models of lunar rovers.

Created conceptual representation of lunar rover chassis featuring double wishbone suspension system on SolidWorks, integrating research findings into final model to demonstrate solution.

Ultimate Frisbee

March 2014 – August 2018

Savage Women's Frisbee Team Captain

Led team as a captain to the Canadian Ultimate Championships 2017 in Ottawa. Demonstrated leadership, perseverance, and ability to help team maintain a positive attitude and high morale.

Team Manager

Directed, organized, and oversaw numerous fundraisers. Was able to fundraise a total of over $7 000 over two seasons.

Richmond Secondary School Science Team

January 2018 – June 2018

Competed at UBC Physics Olympics 2018. Collaborated with teammates to build and test baking-soda and vinegar powered launcher for the competition.

Awarded with Silver Medal in the Polarization Lab Activity