

Joe Corsair

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Engineering Portfolio: www.joecorsair.com | GitHub: [JoeCorsair](https://github.com/JoeCorsair)

EDUCATION

Associate of Science in Engineering

Santa Monica College, Santa Monica, California

To be Conferred June 2024

GPA: 3.7

Transfer Major: Mechanical Engineering

- Relevant Coursework: Introduction to Engineering; Engineering Graphics and Design; Physics Mechanics with Lab; Multivariable Calculus; Principles and Practice of Scientific Research
- Campus Involvement: STEM Program, SRI/STEM, Chemistry Club, Engineering Club

SKILLS

Engineering: Experience with MATLAB; CAD Software (Siemens NX, SolidWorks, Tinkercad); Robotics; Equipment (Multimeter Electrical Testers, 3D printers, Soldering Station and Iron, Circuit Boards)

Programming: Experience with C++; Python

Software Skills: Proficient: Microsoft Office Suite (Excel, Word, PowerPoint); Google Workspace (Docs, Sheets, Slides)

Languages: Spanish – Bilingual

TRAININGS AND CERTIFICATIONS

SOLIDWORKS 2022 Essential Training, *LinkedIn Learning*

June 2023

Certified SolidWorks Associate (CSWA) in Mechanical Design, *Dassault Systèmes*

June 2023

ENGINEERING PROJECTS

Rotating Jewelry Display

May 2023

Engineering Graphics and Design, Santa Monica College, Santa Monica, California

- Designed a rotating jewelry display that included a simulated motor connected to a belt and pulley system, fastened to a gear drive with a 4.1:1 final drive ratio
- Rendered 2D and 3D drawings using SolidWorks and proposed aluminum alloy 6061 and PVC rigid as the internal materials for the display

Edible Car

May 2022

Introduction to Engineering, Santa Monica College, Santa Monica, California

- Designed, drafted, and created a 25 x 25 x 25-centimeter miniature vehicular prototype that was 85% edible and contained three wheels and two axles as well as had the ability to self-propel down a 45-degree inclined ramp a minimum of 1.5-meter distance with three additional members
- Practiced applying concepts such as center of mass, wheel canting, axle alterations, body shape modifications and rotational inertia measurements captured to optimize best shape and speed of vehicle

CAD COURSES

Engineering Graphics and Design

August 2023 – May 2023

Santa Monica College, Santa Monica, California

- Used SolidWorks to create 2D, 3D and pictorial drawings for engineering products following standard engineering design procedures

RESEARCH EXPERIENCE

Lead Systems Engineer Student Participant

May 2022 – August 2022

NASA L'SPACE Mission Concept Academy, Arizona State University, Phoenix, Arizona

- Created a Preliminary Design Review (PDR) with a team of 3 to 6 undergraduate students with the goal of detecting water and signs of life through organic carbon on Mars
- Designed the model Mars cave rover using Siemens NX Computer Aided Design (CAD) based on research findings
- Researched the environment, specifically the terrain and soil conditions of caves on Mars

Principles & Practice of Scientific Research

February 2022 – June 2022

Santa Monica College, Santa Monica, California

- Led group research on the ion content in water samples from the Ballona Wetlands
- Performed chemical experiments and analyzed qualitative results in Microsoft Excel
- Expressed results and findings in the form of a research paper and campus presentation to coincide research