

# GRACE XIAO

## MECHANICAL ENGINEER

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## EDUCATION

9/24 – present      [University of California, San Diego](#)  
Mechanical Engineering, B.S. w/ specialization in Controls & Robotics, GPA 4.00

## TECHNICAL & SOFTWARE SKILLS

- Adobe Photoshop
- C Code
- Fusion 350 CAD
- MATLAB
- Python
- Web (HTML, CSS, Javascript)
- AutoCAD
- Drill Press
- Google Sites
- Machine Learning
- Soldering
- SolidWorks
- 3D Printing
- Laser Cutter
- MS Suite

## EXPERIENCE

7/24 – 9/24      [Obstacle Avoidance w/ Mobile Robots, La Jolla, CA](#)  
**MAE 8 Final Project**

- Performed obstacle avoidance and path planning using MATLAB's Robotics System Toolbox and Navigation Toolbox
- Evaluated model performance in both cuboid meshes and Simulation Description Format (SDF)

04/23 – 08/24      [AI Venture Startup, Fremont, CA](#)  
**Developer / Engineering Intern**

- Implemented Python-based algorithms to develop AI chatbot for education
- Developed a responsive company website w/ HTML, CSS, and Javascript for product integration
- Presented product ideas and designed company logo with Adobe Photoshop

## Activities

12/24 – present      [Students for Exploration and Development of Space @ UCSD, La Jolla, CA](#)  
**Controls Engineer on Liquid Bi-propellant Rocket *Riptide***

- Finalized linear actuator design for use in positioning the engine within a gimbal system and 3D printed miniature model pieces for testing
- Tested actuator and servo motor using C code and Arduino
- Modeled & calculated the engine's expected degree of rotation in CAD

11/24 – present      [Envision Makerspace, La Jolla, CA](#)  
**Events & Outreach Officer**

- Planning and hosting workshops every quarter
- Presenting on various machines (3D printer, laser cutter, sewing machine, etc)

05/22 – present      [Art of Cloud Dumplings, Fremont, CA](#)  
**Personal Project combining Art & Engineering**

- Game development using Twine, Uity, and bitsy
- Developed professional website showcasing art portfolio: [sites.google.com/view/cloud-dumplings](https://sites.google.com/view/cloud-dumplings)
- Creating 50+ posts on social media and 40+ YouTube videos

## Publications

2024      [Evaluating the effectiveness of machine learning models for detecting AI-generated art](#), Journal of Emerging Investigators (JEI)