

# Thomas Wenhui Xu

thomas.w.xu@gmail.com | linkedin.com/in/thomaswxu | thomaswxu.github.io

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## EDUCATION

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### Carnegie Mellon University (CMU) - School of Computer Science

Pittsburgh, PA

- Master of Science in Robotic Systems Development
- GPA: 4.0/4.0

May 2022

### The University of California, San Diego (UCSD)

La Jolla, CA

- Bachelor of Science in Mechanical Engineering with a Specialization in Controls and Robotics
- GPA: 3.87/4.00, Cum Laude

June 2020

## WORK EXPERIENCE

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### UCSD Bioinspired Robotics and Design Lab

La Jolla, CA

Research Assistant

Apr. 2019 - Present

- Fabricated prototypes of bioinspired gripping pads and fluidic elastomer actuators
- Conducted physical material testing and tested performance in simulation

### ASML

San Diego, CA

System Integration Intern

Jun. - Sep. 2019

- Generated data analytics dashboards to visualize and analyze machine efficiency and performance, currently used by company executives in daily team meetings
- Developed semi-autonomous notification tool to streamline performance monitoring and documentation process

### UCSD Jacobs School of Engineering

La Jolla, CA

Engineering Tutor

Sep. - Dec. 2018

- Hosted weekly sessions of an undergraduate introductory engineering/design class
- Clarified key theoretical concepts, taught CAD/CAM skills, oversaw student design studio
- Facilitated and graded assignments (engineering drawings, formal reports, etc.)

### Solar Turbines

San Diego, CA

Packaging and Systems Intern

Jul. - Sep. 2018

- Developed VBA/Excel tool to autonomously identify optimal package lift kit arrangements
- Presented tool development and progress to senior engineers, company executives
- Carried out finite element analysis of product components using ANSYS Mechanical
- Achieved savings of ~\$50k annually (through material costs, engineering hours)

## PROJECTS

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### Predictive Avoidance for Mobile Robots

OMRON, CMU | Aug. 2020 - Present

- Developed multi-algorithm framework to optimize collision avoidance for mobile robots
- Framework to be implemented and validated in simulation (ROS, Gazebo)

## SKILLS

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**CAD Software:** SolidWorks, SOFA, AutoDesk Inventor, Gmsh, AutoCAD, ANSYS Mechanical

**Programming Languages:** MATLAB, Python, VBA, HTML, XML, C++

**Other Software:** Git, ROS, CMake, Adobe Photoshop, Illustrator, TIBCO Spotfire

**Bilingual:** Chinese, English