

# Zijian Wang

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## EDUCATION

### Carnegie Mellon University, Pittsburgh

December 2026

Master of Science in Artificial Intelligence Engineering - Mechanical Engineering

### University of California, San Diego

March 2025

Bachelor of Science in Mechanical Engineering with specialization in robotics and controls

## SKILLS

Software: AutoCAD, SolidWorks, Ansys, eQuest

Program languages: MATLAB(Simulink), Python (OpenCV, PySpark, NumPy, PyTorch, Pandas), ROS

Database: SQL, Neo4j, Kafka

## PROJECTS

### Locomotion of Robot in Granular Environment - UCSD Gravish's Lab

Jun 2023 - Mar 2025

- Researched granular motion and robot mobility in a granular environment for over 100 hours.
- Assisted graduate researchers in manufacturing soft body actuation robots; continue iterated 5 prototypes
- Assessed the mobility performance of the robot, and improved the mobility efficiency (moving distance per cycle of motion) in the granular environment by up to 15% through optimized design.
- Built prototype composed of actuators and vibration motors applying innovative rapid prototyping techniques including 3D printing, stereo-lithography, and polymer CNC machining.
- Tested prototype in the granular environment more than 50 times
- Documented findings in two detailed project reports for presentation
- Designed and refined the control circuit of the prototype robot to improve the stability and response speed of the robot in the complex environment.

### Manufacturing of An Autonomous Vehicle Prototype - UCSD MAE Department

Dec 2022 - Apr 2023

- Created a 1/10-scale autonomous car for operation on a simulated city track.
- Contributed to the development of computer vision and pathfinding algorithms on the NVIDIA Jetson Nano platform, collaborating with the team to achieve reliable autonomous navigation.
- Led the design, 3D modeling in SolidWorks, and manufacturing of vehicle parts utilizing 3D printing technologies.
- Utilized the deep learning model to train the automatic driving algorithm of the car on the GPU cluster, deployed it in the onboard computer of the car, and reached the automatic driving success rate of 90%.

## PROFESSIONAL EXPERIENCE

### Beijing Delphi Wanyuan Engine Management Systems Co., Ltd., Beijing, China

Aug 2024 - Sep 2024

#### Manufacturing Engineer Intern, Manufacturing Engineering Department

- Participated in the trial production of SOKON's ignition coil, responsible for conducting production line changeover inspections and testing to ensure smooth transition and quality control.
- Wrote and revised 2 PFD-PFMEA-PCP new product documents; raised the acceptance rate of Party A by 25%.
- Conducted 30 tests on the existing ignition coil production line, reducing production line failure rate by 10%.
- Assisted in compiling 10 pieces of work instructions to ensure the smooth production of the new model.
- Made one improvement to the existing ignition coil product and increased the product life by 10%.
- Performed CAD design with SolidWorks and fabricated 3 experimental kits with 3D light-curing printing technology, reducing the prototype development cycle by 20%.

### Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China

Jun 2019 - Aug 2019

#### Technical Assistant Intern, Research Lab

- Designed and developed a transformer powering the scanning electron microscope prototype's supply module
- Completed 2 high-precision CAD blueprint design with AutoCAD.
- Manufactured and assembled PCB for 3 prototypes to ensure the reliability and stability of the circuit.
- Tested the power supply units of two tunneling microscopes, collected and analyzed the experimental data, and optimized the power efficiency by 20%.

## TEACHING ASSISTANT EXPERIENCE

### MAE Department TA - UCSD

Oct 2023 - Aug 2024

#### Teaching Assistant

- Answered more than 200 questions for undergraduate students with poor academic performance in the Mechanical Engineering major both online and offline.
- Supported faculty with grading, exam supervision, and student mentoring.