

Dechao Jiang

Education

University of California, Berkeley	Master of Engineering <i>Mechanical Engineering (Control of Robotic and Autonomous Systems)</i>	Aug 2024 – May 2025
University of Macau	Bachelor of Science with Honours <i>Electro-Mechanical Engineering</i> <i>Graduate with honours for outstanding academic performance and leadership qualities</i>	Aug 2020 – Jul 2024

Technical Skills

Software: SolidWorks, AutoDesk Fusion and AutoCAD, CATIA, ANSYS, Slic3R, MS Office, Git

Manufacturing: 3D-Printing, G-Code, CNC

Programming: C++, Embedded C, Python, MATLAB

Professional Experience

Mechanical Systems Control Lab <i>Mechanical Engineer</i>	Berkeley, CA Sep 2024 – May 2025
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- Collaboratively designed modularized robot arm linkages using **Autodesk Fusion**.
- Developed **URDF** models from CAD designs for software simulation, to **iterate design** of the linkage.
- Manufactured design via **3D printing**, assembled the prototype, and carried out **V&V** to validate the concept.

Center for AI & Robotics, Macau <i>System Integration Lead</i>	Taipa, Macau Jun 2023 – Jun 2024
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- Built a 3D FDM Printer for Advanced Functional Material Fabrication
- Collaborated with vendors in structural **design for manufacturability**, and **motor kinematic analysis**.
- Programmed a 3-axis **ABB servo** system with **10-micrometers** resolution for motion control.
- Fabricated printhead connectors utilizing **CNC machining**.
- Delivered comparable resolution and functionalities to commercial systems while **reducing cost by 60%**.

SUIRUI Technology Group <i>Mechanical Design Engineer Intern</i>	Beijing, China Jun 2024 – Aug 2024
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- Designed motor enclosure with **DFM** and **GD&T** principles for mass-produced grid inspection robot.
- Conducted thermal **FEA** using **SolidWorks Simulation** to analyze and optimize motor performance.
- Created **BOMs** and **AutoCAD** floor plans for 3 onsite rail inspection robot installation projects.

Smart and Micro/Nano Systems Lab, University of Macau <i>Research Assistant</i>	Taipa, Macau Jul 2022 – Apr 2024
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- Designed robotic platform in **SolidWorks** to connect UGV base and manipulator.
- Simulated and controlled a customized robot in **Gazebo** within **ROS** network.
- Achieved successful rate of **92.3%** in book detection and **generated grasp pose** through **computer vision**.
- Implemented Hector-mapping SLAM algorithm to achieve indoor navigation on MiR250 robot.