

Rui Xu

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EDUCATION

Hong Kong University of Science and Technology, Guangzhou, CN
Ph.D. of Artificial Intelligence (In Progress)

August 2023 - Present

University of California Berkeley, US
Master of Mechanical Engineering
Concentration: Modeling and Simulation of Manufacturing Process

June 2019- July 2020
GPA:3.84

University of Pittsburgh, US
Bachelor of Mechanical Engineering • Honor Student

September 2017- April 2019
GPA:3.96

Sichuan University, CN
Bachelor of Mechanical Engineering • Dean's List

September 2015 – June 2019
GPA:3.63

SKILLS

- **Specialization:** Machine Learning, Simulation and Modeling, Finite Element Analysis
 - **Programming:** Python (PyTorch, Tensorflow, Matplotlib), MATLAB, MySQL
 - **Modeling:** Creo, SolidWork, Hypermesh, ANSYS, COMSOL
 - **Language:** English (Professional Proficiency), Chinese (Native)
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Research

• Design of a Rotating Camera System for Stereo Imaging Large Deformations of Soft Tissues

Description: In order to measure the deformation of soft tissues, a stereo imaging system is designed and connected to VIC-3D software. The whole system consists of three parts: programmed motor, servo pump, and camera mount.

Responsibility: Determined project milestones as the project manager, participated in preliminary design based on SolidWork, worked on BOM, constructed the prototype, and conducted experimental data validation.

Prize: University of Pittsburgh, the 3rd place of Senior Design Expo (Swanson School of Engineering Mechanical Part)

• Wildfire Historic Data Analysis and Machine-Learning Model for Multi-UAV Path Planning

Description: Capstone Project of University of California Berkeley, Fung Institute. The project focuses on applying drones to wildfire prevention and fighting. By collecting wildfire historic data, its frequency, area, causality can be investigated. One high-risk region is selected as a case study to apply machine learning model for multi-UAV path planning, which is designed to optimize UAV flight path automatically.

Responsibility: Collected and visualized wildfire data, constructed original mathematical model, participated in transferring math equations to program languages.

WORK EXPERIENCE

Engineering Project Management Assistant Intern

Commercial Aircraft Corporation of China Ltd, Department of Development & Planning

May-July 2018

- Participated basic process of modern aircraft design
- Collected monthly plan information of each department, wrote project updating report

New Material Engineer

June 2020 - June 2023

OPPO/OnePlus, Process Pre-research Group of Structure Technology Department

- Completed pre research of new material technologies by data-driven analysis and machine learning, especially for glass melting and casting
- Followed up trial production, found and solved process-related problems