TIANYI XU

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EDUCATION

Columbia University, New York, NY
MS in Electrical Engineering   Expected Dec 2024
- Specialization in Data-Driven Analysis and Computation.

Sichuan University, Chengdu, China
BE in Automation, 3.6/4.0   Jun 2023
- Relevant course work: Principle of Automatic Control, Data Structures & Algorithms, Digital Electronic Technology, Digital Image Processing, Signals and Systems, Principle of Microcomputer and Interface Technology.

RESEARCH EXPERIENCE

University of Illinois at Urbana-Champaign, Online   Jan 2022 - Jun 2022
Introduction to Robotics Online Research Seminar
- Completed design of a cart robot on Arduino with partners, as team leader. Organized meetings to communicate between team members, and apportioned assignments to every person.
- Studied 3D modeling, PCB design, simulation, and debugging. Mastered Altium Designer PCB design and SIMULINK simulation. Learned how to create a 3D model on FUSION 360 and develop microcontrollers on Arduino IDE.

Sichuan University, College of Electrical Engineering, Chengdu, China   Sep 2021 - Jun 2022
Monocular 3D Photogrammetry
- Matched feature points in 2D images to reverse construction of 3D models of scenes and objects.
- Improved flexibility and applicability of real-time 3D modeling of scenes by using monocular cameras.

Sichuan University, College of Electrical Engineering, Chengdu, China   Sep 2020 - Jun 2021
Initiation and Growth of Electrical Tree
- Utilized high voltage and high-frequency platform built in the National Innovation Laboratory to shock materials and observe shape and pattern of electrical trees through high precision microscope.
- Organized whole process of project operation, such as material preparation, testing, and analysis. Launch brainstorm about 5 times with team members when encountered difficulties.

ACADEMIC PROJECTS

National Undergraduates Electronics Design Contest
- Won Second Prize in 2022, Third Prize in 2021. Served as team captain for two electronic design competitions.
- Constructed hardware circuits and designed programs from scratch according to contest's requirements.
- Improved debugging ability combining hardware and software, mastered skills of PCB design on Altium Designer, and capability of developing microcontrollers on the Keil platform.

Asia and Pacific Mathematical Contest in Modeling
- Won Third Prize in 2021. Served as team captain, and led team to build Mathematical model.

CONFERENCES
- Title: Structure from Motion and Visual-Inertial Simultaneous Localization and Mapping for Three-Dimensional Reconstruction. 2022 International Conference on Electronics and Devices, Computational Science (ICEDCS), Jan 2, 2023.

SKILLS & INTERESTS
Field: Embedded System Development, Robotic, Computer Vision.
Skills: C/C++, Python, PCB design, 3D modeling.
Platforms: Keil, Code Composer Studio, Arduino IDE.