Run Shi

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Research Intersts

My research interests mainly lie in elastocaloric cooling(devices and materials) and electrocaloric. I am now focusing on the devices of elastocaloric cooling, exploring its potential for higher temperature difference. I achieve high score in Engineering Material and Fluid Mechanics.I also have a background in PTVs.

Experience

- **Karlsruhe Institute of Technology-Institue of Microstructure Technology [🌐]** *Jun 2024 - Sep 2024*
  Undergraduate Research Intern Karlsruhe, Germany
  - Build 3D models by Creo to build an elastocaloric experimental platform
  - Use Ansys to machine parts to meet strength requirements
- **Shanghai Jiao Tong University** *Aug 2023 - Mar 2024*
  Undergraduate Research Intern Shanghai, China
  - Design and build carbon dioxide gas release experimental platform
  - Implemented Calibration analysis of different orifice plates for bubble PTVs, Dual view shot of bubbles

Education

- **Shanghai JiaoTong University** *Sep 2021 - Jun 2025*
  Bachelor Shanghai, China
- **Karlsruhe Institue of Technology** *Apr 2024 - Sep 2024*
  Exchange Student Karlsruhe, Germany

Projects

- **Trolly for automatic planting of pike seedings** *Sep 2023 - Jan 2024*
  Tools: [SOLIDWORKS/Arduino]
  - Awarded [Tencent 'Light' Technology Charity Creation Camp Investment(top 1%)] with [¥40w (about $6k)]
  - Created [3D model], ensuring [Feasibility of processing and installation sites]
  - Created [Physical Mechanical Structures] , achieving [Hollow drill seedling]
  - Applied [Physical Mechanical Structures in Desert and keep optimizing]
- **Mass testing system design using Labview** *Dec 2023 - Jan 2024*
  Tools: [Labview]
  - Awarded [Best Design and Report(top 10%)]
  - Created data acquisition, data processing (low-pass filtering, array conversion, 2 waveform intercepts), and conversion of output voltage to quality results to complete the desired goal
- **Intelligent Logistics Handling Robot** *Mar 2021 - Oct 2021*
  Tools: [SOLIDWORKS/Arduino]
  - Implemented Arduino trajectory, gripping debugging, and project report writing
  - Created mechanical gripper models by using SOLIDWORKS

Skills

- **Skills:** SOLIDWORKS , Creo , Matlab , Labview , Latex , Ansys , Comsol , C++ , Python , Find , Arduino
- **Languages:** English(Tofel 102/120) Chinese(Native)

References

1. **Dr. Jingyuan Xu**
   Head of "ZEco Thermal Lab"
   Karlsruhe Institute of Technology/Institue of Microstructure Technology
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   Phone: +49 721 608-24781
   Relationship: [Research Supervisor]