



Changxing Lin



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Male



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South China
Agricultural University



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Education Background

South China Agricultural University (Guangzhou) GPA 3.6

September 2023–Present

Agricultural Mechanical Engineering | Master of Engineering

- Research Interests: Computer Vision (3D Modeling, Object Detection, Semantic Segmentation)
- Application: Using drone-acquired images, using semantic segmentation and 3D reconstruction from multi-view geometry, we modeled a sugarcane transporter in the field. We then combined the identified number of sugarcanes on the surface and the volume of the pile to estimate the impurity rate of the sugarcane.

Beijing Institute of Technology Zhuhai College (Zhuhai)

September 2019–July 2023

Aerospace Manufacturing Engineering | Bachelor of Engineering

- Major courses: Aerodynamics, Aeronautical Engineering Mechanics, Structural Mechanics, C Language

Skills and Certificates

Image Processing

Programming Languages

Simulation Analysis

CAD/Graphics Design Software

Languages and Certifications

Other

YOLO, DeepLab, 3DFlow, MeshLab, Photoshop, CapCut
Python, C

Finite Element Simulation (HyperMesh), Discrete Element Simulation (EDEM/ZWDE),
Multibody Dynamics (Recurdyn)

AutoCAD, ZWDE CAD, ZWDE 3D, CATIA, SolidWorks

CET-6, BEC Business English Intermediate, IELTS (preparing)

National Computer Level 2 Certificate, Motor Vehicle Driver's License (C1)

Internship Experience

Zhongwang Discrete Element Simulation Technology Support Intern (2024.6–2024.12)

- Analyzed and reproduced complex simulation cases using ZWDEM and ZW3D software to diagnose functional issues and assist software improvements.
- Authored comprehensive technical documentation to streamline customer support, improving self-service capabilities for users of ZWDEM software.

Altair Finite Element Structural Simulation (HyperMesh) Technical Support Intern (2023.10–2024.4)

- Troubleshooted customer technical inquiries and delivered software training sessions, fostering user proficiency with the HyperWorks suite (HyperMesh, HyperView) and EDEM.
- Proficient in using the HyperWorks series of tools (HyperMesh, HyperView) and EDEM for simulation technical support

Graduate School of South China Agricultural University | Part-time Counselor (2023.9–2023.12)

Guangdong Province University Physics Experiment Design Competition: (Embedded Systems Group) (2020)

- Led a 4-person team to engineer an ultrasonic suspension device based on Arduino UNO, achieving stable suspension of small objects via a designed C program.

Research and Projects

Patent: A method for detecting the impurity rate of cut sugarcane segments in drone-captured images, based on YOLOv8.

Main work: Use Roboflow to calibrate and enhance the data, then perform target detection using an improved YOLOv8 architecture. Integrate the optimised model into the JETSON edge device, design the UI interface and develop a Python-based impurity rate calculation tool.

Awards

Scholarships: First-class Graduate Scholarship (twice), National Encouragement Scholarship (twice),
Second-class University Scholarship (twice)

Competitions: Competitions: Third Prize in the Asia-Pacific Cup Mathematical Modeling Competition (Programmer),
Third Prize in the Blue Bridge Cup Python Provincial Competition,
Second Prize in the Guangdong Provincial Physics Experiment Design Competition

Honours: University-level "English Learning Model"