Jessica Zhiyao **Jiang**

JessicaJiang-123.github.io github.com/JessicaJiang-123 linkedin.com/in/jessicajiang324
(+86) 13310888380 jessicajiang324@gmail.com 786213911@qq.com
777 Xingye Avenue East, Panyu District, Guangzhou, Guangdong, China
March 2003, Guangzhou, Guangdong, China

Bio. I am currently a junior undergraduate student majoring in Intelligent Manufacturing at Shien-Ming Wu School of Intelligent Engineering, South China University of Technology, China.
Skills. Python, C++, Matlab, HTML/CSS, RISC-V, SolidWorks.

Education

Aug 2021 – Jun 2025 (expected)
Bachelor's Degree, **South China University of Technology** (SCUT), Guangzhou, China
College : Shien-Ming Wu School of Intelligent Engineering (In collaboration with **UMich, Ann Arbor**)
Major : Intelligent Manufacturing
GPA : 3.82/4.0
Courses : C++ Programming**(4.0/4.0)**, Python**(4.0/4.0)**, Data Structures and Algorithms**(4.0/4.0)**, Artificial Intelligence**(4.0/4.0)**, Natural Language Processing, Deep Learning, Big Data Applications in Industry**(4.0/4.0)**, Modeling, Analysis and Control of Dynamic System, Classical Control Theory

Aug 2023 –Dec 2023
Visiting Student, **University of California, Berkeley** (UCB), Berkeley, USA
Program : Berkeley Global Access Program
Courses : CS 180 : Introduction to Computer Vision and Computational Photography **(A)**, CS 61C : Great Ideas of Computer Architecture (Machine Structures), EECS 127 : Optimization Models in Engineering, CS 198 : Directed Group Studies for Advanced Undergraduates (GamesCrafters)

Projects & Experiences

March 2024 present — **Inference Optimization Techniques for Transformer-based Models, SCUT, Student Research Program**
- The goal is to achieve a 5x speedup over BERT with an accuracy degradation of less than 1%.

Feb 2024 — **Deep Learning, University of Cambridge, UK, Winter Program**
- Develop a fundamental knowledge of deep learning.
- Complete a group project on facial expression recognition and deliver a presentation.

Aug 2023 Dec 2023 — **Computer Vision and Computational Photography, UC Berkeley, USA, Course Projects**
- Extract, align, and merge color channels from glass plate images to minimize visual artifacts.
- Implement gradient computation, filtering, and blending techniques to create innovative visuals.
- Create a face morphing animation and a caricature based on the calculated average face.
- Automate photograph stitching process to create panoramic composite images from multiple photos.
- Implement a simplified Neural Radiance Field using *PyTorch*.
- Re-implement the paper of *A Neural Algorithm of Artistic Style*.
- Apply Poisson blending for seamless object integration in images using gradient-domain processing.
- Webpage Reports : Project 1, Project 2, Project 3, Project 4, Project 5, Final Projects

July 2022 Sep 2022 — **Autonomous Mobile Robots, University of Cambridge, UK, Online Research Seminar**
- Develop a foundational knowledge of autonomous mobile robots (vehicles).
- Collaborate with group members to design robots using *Webots* and implement CBS and HCA algorithms to tackle path-planning challenges in autonomous robots.
- Published a paper titled : *Research on Multi-robot Material Picking and Autonomous Path Planning System in Industrial Environment*at the 2023 IEEE 2nd International Conference on EEBDA.

Apr 2022 Aug 2023 — **Lower Limb Rehabilitation Exoskeleton Robot, SCUT, Intelligent Rehab Equipment Research Center**
- Implement control theory concepts through projects involving joint simulation using *Matlab* and *Adams*, utilization of Simulink in *Matlab*.
- Explore electromyography (EMG) basics and signal processing, utilizing a six-channel EMG sensor to collect signals from five lower limb muscles while subjects perform four specific movements on a laboratory lower limb rehabilitation exoskeleton robot.

Languages

English : **IELTS 7.5** (Listening 8.5, Reading 8.0, Writing 7.0, Speaking 6.5)

Honors & Awards

Fall 2021 Youth Ambassador of Guangzhou International Campus, South China University of Technology
Fall 2022 Third prize in Provincial Level in 2022 National College Student Mathematical Modeling Competition
Fall 2023 Second-class Scholarship for Undergraduate Students of SCUT (¥20,000)

(last update : 17 Apr. 2024)