Siyi Chen

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EDUCATION

University of Michigan-Ann Arbor, College of Engineering, Michigan
B.S.E Computer Science Engineering, Minor Mathematical Science **Sept 2020 - May 2022**

- Cumulative GPA: 4.0/4.0
- Coursework: Computer Vision(A), Machine Learning(A), Computer Architecture(A), Graph and Combinatorics(A), Algorithm, Compiler, Database, Linear Programming

Shanghai Jiao Tong University, University of Michigan-Shanghai Jiao Tong University Joint Institute, Shanghai, China
B.S.E. Electronic and Computer Engineering **Sept 2018 - Aug 2022**

- Coursework: Probabilistic Methods in Engineering(A), Honorable Mathematics(A), Electronic Circuits, Signals and Systems, Logic Design, Electromagnetics

RESEARCH EXPERIENCE

Computer Vision for Physical and Functional Understanding **May 2021 – Present**
University of Michigan, Research Assistant
Advisor: David Fouhey, Assistant Professor / University of Michigan

- Jointly optimize 3D human and articulated planes with differential rendering in an unsupervised way
- Generate synthetic 3D dataset of moving objects using SAPIEN

Convex Presentations of Translation Surfaces **Jan 2021 - Apr 2021**
University of Michigan, Research Assistant
Advisor: Chaya Norton, Postdoctoral Assistant Professor / University of Michigan
Paul Apisa, Donald J. Lewis Research Assistant Professor / University of Michigan

- Design and implement an enumeration algorithm to generate origamis in genus 2 using Sage
- Implement the Lelièvre-Weiss Strict Convexity Test algorithm using Sage

Video Anomaly Detection **July 2021 - Present**
Shanghai Jiao Tong University, Research Assistant
Advisor: Xu Zhao, Professor / Shanghai Jiao Tong University

- Reproduce a multi-task approach of video anomaly detection with deep neural networks using TensorFlow
- Start experimenting multi-task approach to detect human violence in videos

Design a 3D Scanning Camera to Detect the Surface Damage of Battery Packs **Jan 2021 - May 2021**
Shanghai Jiao Tong University, Research Assistant
Advisor: Peisen Huang, Dean and Professor / Shanghai Jiao Tong University

- Implement a pinhole camera model and a lens camera model using Python
- Conduct camera calibration using Zhang's method using MATLAB

A New Microwave Imaging Method in Human Skull Based on Artificial Intelligence
Shanghai Jiao Tong University, Research Assistant **Oct 2019 - Aug 2020**
Advisor: Hongli Peng, Associate Professor / Shanghai Jiao Tong University

- Implement GUIs for signal processing using Python Tkinter
- Simulate the distribution of microwave energy in human skull under different conditions and try to find ways to concentrate the energy on target positions using CST

TEACHING EXPERIENCE

Teaching Assistant for Probability Statistics Methods **Apr 2020 - Aug 2020**
Instructor: Horst Hohberger, Professor / Shanghai Jiao Tong University Joint Institute, Shanghai Jiao Tong University

Teaching Assistant for Honorable Mathematics III **Oct 2020 - Dec 2020**
Instructor: Horst Hohberger, Professor / Shanghai Jiao Tong University Joint Institute, Shanghai Jiao Tong University

HONORS & AWARDS

Gold Medal Winner of the 2019 University Physics Competition (UPC) **Dec 2019**

The Roger King Scholarship in University of Michigan **Aug 2021**

University Honors in University of Michigan, twice **Apr 2021, Dec 2020**

Dean's List in University of Michigan **Dec 2020**

Honorable Mention of the 2020 Mathematical Contest in Modeling (MCM) **May 2020**

Excellent Manager in the Academic Center of the SJTU Student Union **Oct 2019**

VG100 Best Technology Award in 2019 UM-SJTU JI Summer Design Expo **Aug 2019**

LEADERSHIP & ACTIVITIES

SJTU Student Union, Academic Center, Manager **Mar 2019 - Nov 2020**

- Lead organization teams for SJTU Debate Competitions
- Participate in organizing the Second Term of Shanghai College Student Debate Competition

SJTU Student Club Community, Design Center, Director **May 2019 - Jan 2021**

- Lead Design Teams for Campus Events such as SJTUers' Festivals
- Give lectures at SJTU Student Club General Meetings.

SKILLS

Languages: Python, C++/C, MATLAB, SQL, Java, HTML, Sage, Rust, Verilog
Tools: CUDA, GitHub, GitLab, Google Colab, Mathematica, docker
Environment: PyTorch, TensorFlow, Conda