

SIZHE WEI

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🎓 EDUCATION

Shanghai Jiao Tong University (SJTU)

Sep 2021 – Mar 2024 (Expected)

Recommending Exam-Free Postgraduate Candidate, Advisor: Prof. Ya Zhang
Cooperative Medianet Innovation Center

Shanghai Jiao Tong University (SJTU)

Sep 2017 – Jun 2021 (Expected)

B.Eng Student, Advisor: Prof. Ya Zhang & Prof. Wenjun Zhang
Zhiyuan Honors Program of Engineering (Elite program for Top 5% students)
Information Engineering, Depts. Electronic Engineering

National University of Singapore (NUS)

Jun 2019 – Jan 2020

Research Intern, Advisor: Prof. Bingsheng He & Dr. Zeyi Wen

🏢 PROFESSIONAL INTERNSHIP

GY-Lab, Tencent

Jan 2021 – Present

Applied Research Intern

- Complete the algorithms encapsulation in C++ of vision functions such as: gaze estimation, scene detection, AR special effects.
- Finish the performance automation test module of the corresponding algorithms in C++.

★ RESEARCH INTERESTS

To answer the question of "how can I trust AI", I focus my research interests in Explainable Artificial Intelligence (XAI), Machine Learning, and Computer Vision, especially on object detection and image processing. I am also passionate about solving challenging problems using Mathematics and Codes.

🏠 RELATED PROJECTS

Video interaction instance based on FreeSwitch

Apr 2020 – Jun 2020

Course Project for EE450: Multimedia Communication Systems and Applications

- Built a video interaction system based on FreeSwitch interactive platform and multiple clients.
- Completed functions of video conference, video live broadcast and video on demand.
- Finished the web client based on webrtc, jssip and mobile client based on xefiro, which realized the function of adjusting bit rate and video conference layout.

MAUC Explainable AI System

Jun 2019 – Feb 2020

Zhengyi Li, Zeyi Wen, **Sizhe Wei**, Bingsheng He

- Designed a system which uses simple machine learning models such as weighted k-means to approximate the unexplainable models.
- Supports 4 interpretation methods including Prototype, Feature influence, Feature contribution, and Counterfactual explanation.
- Got excellent results on some open-source datasets. The result of our work is under revising.

AI One Image

Dec 2019 – Jan 2020

Project for Google Machine Learning Winter Camp, Shanghai

- Designed a demo named AI One Image, which contributes to matting, auto-beauty and style transfer.
- Completed the project using PyTorch based on U-Net, VGG, and generative CNN.
- Won the prize for People's Choice of Google Machine Learning Winter Camp.

Medical 3D Voxel Classification

Oct 2019 – Dec 2019

Course Project for EE369: Machine Learning

- Implemented a voxel classifier using PyTorch based on Densenet.
- More than 500 patients' 3D CT scans and manual masks are contained.
- The AUC on test dataset is above 0.70.

Stair Climbing Robot Car

Jun 2018 – Jul 2018

Course Project for ES004: Electronics System Design Based on Android System

- Implemented project of auto-stair-climbing robotic car which is divided into two parts: controlled end (robot car) and controller end (mobile phone).
- Used C/C++ to implement the robot car, which can climb stairs based on MCU MSP430™.
- Finished the controller of an Android application using MIT App Inventor.

🏆 HONORS AND SCHOLARSHIPS

Zhiyuan Honors Scholarship

Top 5%, CN ¥5000, Zhiyuan College, Shanghai Jiao Tong University 2020, 2019, 2018, 2017

Academic Excellence Scholarship (Third-Class) of Shanghai Jiao Tong University

Top 10%, CN ¥500, Shanghai Jiao Tong University 2020, 2019, 2018

People's Choice of Google Machine Learning Winter Camp

China Talent & Outreach Program Team, Google Information Technology (China) Company Limited 2020

Meritorious Winner, 2018 Interdisciplinary Contest In Modeling (Problem D)

Consortium for Mathematics and Its Applications 2018

✍️ TEACHING SERVICES

CS 157: Thinking and Approach of Programming (Honors), Fall 2020

Teaching Assistant of A/Prof. Tongzhen Zhang, Shanghai Jiao Tong University Sep 2020 - Jan 2021

CS 158: Data Structures (Honors), Spring 2020

Teaching Assistant of A/Prof. Yuquan Chen, Shanghai Jiao Tong University Feb 2020 - Jul 2020

⚙️ SKILLS

- Programming languages: C/C++, Python, MATLAB, HTML/CSS, Java
- Tools & Frameworks: FFmpeg, x265/x264, GPAC, Nginx, L^AT_EX, Git, VHDL, Docker
- Platforms: PyTorch, Linux/Unix, LabVIEW, FreeSWITCH, WebRTC
- Languages: English, Mandarin (Native)

Last Update: April 29, 2021