Sizhe Wei

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Education

Shanghai Jiao Tong University (SJTU), Shanghai, China Sep 2017 – Jun 2021

Bachelor of Engineering in Dept. Electronic Engineering.
School of Electronic Information and Electrical Engineering.
Zhiyuan Honors Program of Engineering (An elite program for Top 5% students).
GPA: 84.819 / 100

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. I am also passionate about solving challenging problems using Mathematics and Codes.

Related Experiences

Shanghai Jiao Tong University Jun 2020 – Present

Research Intern Under the supervision of Dr. Dequan Wang

- We will start our work in the area of Computer Vision and Robotics.

Xtra Computing Group, National University of Singapore Jun 2019 – Jan 2020

Research Intern Under the supervision of Prof. Bingsheng He and Dr. Zeyi Wen

- In order to explain some unexplainable models in artificial intelligence, we designed a system which uses simple machine learning models such as weighted k-means to approximate the unexplainable models.
- Our system supports 4 interpretation methods including Prototype, Feature influence, Feature contribution, and Counterfactual explaination.
- The system gets excellent results on some open-source datasets. The result of our work has been submitted to KDD 2020.

Google Machine Learning Winter Camp, Shanghai Jan 2020

Member Selected as one of 100 participants nationwide for Google ML Winter Camp.

- The camp is a programming competition run by Google Information Technology (China) Company Limited.
- We designed a demo named AI One Image, which contributes to matting, auto-beauty and style transfer. The project was completed using PyTorch based on U-Net, VGG, and generative CNN.
- Our project won the prize for People's Choice. And we have open-sourced our code, which can be used on local devices.

Coursework Projects

Medical 3D Voxel Classification Oct 2019 – Dec 2019

Group Leader Under the supervision of Dr. Bingbing Ni

- I used PyTorch to implement a voxel calssifer based on Densenet.
- The dataset contains 500 patients' 3D CT scan and manual masks.
- The AUC on test dataset is above 0.70.

Stair Climbing Robot Car Jun 2018 – Jul 2018

Group Leader Under the supervision of Lecturer. Shiwen Zhang

- The project is devided into two parts: Controlled end (robot car) and Controller end (mobile phone).
- We used C/C++ to implement the robot car, which can climb stairs based on MCU MSP430™.
- And the controller was finished as an application on Android, which was implemented using the visual programming language on MIT App Inventor.

Related Courses

Mathematics Foundation: Mathematical Analysis(H), Physics(H), Linear Algebra(A), Discrete Mathematics(A), Probability and Statistics(A), Linear and Convex Optimization(A)
Professional Courses: Thinking and Approach of Programming(A), Data Structures and Algorithms(A+), Electronics System Design Based on Android System(A), Analog Electronic Technology(A-), Signals and Systems(A), Machine Learning(A), Principles of Wireless Communication and Mobile Networks(A+)

Honors and Scholarships

Meritorious Winner, 2018 Interdisciplinary Contest In Modeling (Problem D)
Consortium for Mathematics and Its Applications. 2018

Zhiyuan Honors Scholarship of Shanghai Jiao Tong University
Top 5%, CN ¥5000, Zhiyuan College, Shanghai Jiao Tong University. 2017, 2018, 2019

Academic Excellence Scholarship (Third-Class) of Shanghai Jiao Tong University
Top 10%, CN ¥500, Shanghai Jiao Tong University 2018, 2019

People's Choice of Google Machine Learning Winter Camp
China Talent & Outreach Program Team, Google Information Technology (China) Company Limited. 2020

Teaching

CS 158: Data Structures (Honors)
Teaching Assistant: Shanghai Jiao Tong University, Shanghai, China Feb 2020 - Jul 2020

Skills

- Programming: Python, C/C++, MATLAB, Verilog HDL
- Tools & Frameworks: Linux/Unix, LaTeX, Git, PyTorch
- Languages: English, Mandarin (Native)
- Courses in proceeding:
  - MIT: Missing Semester IAP 2020
  - Stanford: Algorithms Specialization, on coursera
  - deeplearning.ai: Deep Learning Specialization, on coursera

Students Activities

- SJTU ChuCai Program member (Honored to be selected as one of 45 students of Class 2021)
- SJTU Baidu® club member
- Zhiyuan college basketball team member

Last Update: July 3, 2020