Zhengyu Wu

Mobile: (+86) 15821929510 Email: wuzhengyu@sjtu.edu.cn

EDUCATION

Shanghai Jiao Tong University (SJTU) Sept. 2015 to Jun. 2020 (expected)

School of Electronic Information and Electrical Engineering Shanghai, China

- B.S. Software Engineering
- Major GPA: 3.62/4.3
- Related Courses: Linear Algebra (90/100), Probability and Statistics (94/100), Computer Vision (96/100)

University of California, San Diego (UCSD) Jul. 2019 to Sept. 2019

Summer Research Internship, Department of Cognitive Science La Jolla, USA

RESEARCH INTEREST

Data Mining, Machine Learning

PUBLICATIONS

Xuecheng Li, **Zhengyu Wu**, Ting Han Gamification-Based VR Rowing Simulation System. HCI (2) 2019: 484-493 Paper

Xibai Li, **Zhengyu Wu**, Yan Sun, et al. A Method to Diagnose Discoid Lateral Menisci on Radiographs Using Image Processing Tools and Machine Learning. Knee Surgery, Sports Traumatology, Arthroscopy (Under review)

Zhengyu Wu, Liwei Lin, Zhengui Xue. A Novel Sybil Attack Detection Scheme Based on Edge Computing for Mobile IoT Environment. (Manuscript)

RESEARCH EXPERIENCE

Pain Detection Jul. 2019 to Sept. 2019

Supervised by Prof. Virginia de Sa (University of California, San Diego)

- Research assistant for summer internship
- Programmed LED flashing patterns with Arduino to represent unique numbers which matched the fps of a GoPro video camera
- Recognized LED patterns in video frames by computer vision methods
- Synchronized EEG signals and video frames which would contribute to further publications
- Helped build a two-stage deep learning model for pain detection on videos which achieves state-of-the-art results

VR Rowing Simulation System Oct. 2018 to Jan. 2019

Supervised by Prof. Ting Han (SJTU)

- Implemented a VR rowing machine using Unity
- Explored new paths in rowing training using human computer interaction and is of great relevance in the application of gamification theory in sports training
- Published a paper on HCII 2019

Diagnose A Kind of Knee Disease by Machine Learning Methods April. 2018 to Sept. 2018

Supervised by Prof. Yan Sun (SJTU)

- Employed an object detection model called YOLO (You Only Look Once) to crop radiographs
- Preprocessed images by morphology methods like eroding and dilating operations and used Canny and Sobel

operators to realize image fringe detecting and picking up
- Flipped, rotated and translated images to increase training data and test data
- Submitted a paper to Knee Surgery, Sports Traumatology, Arthroscopy

Visual Question Answering Model Based on GAN Nov. 2017 to Nov. 2018

Supervised by Prof. Ruhui Ma (SJTU)
- Proposed a deep learning model based on GAN which projected answers along with fusions of image features and question features into a latent space for semantic alignment
- Achieved state-of-the-art BLEU results on short answers of VQA 2.0 dataset

Detecting Sybil Attack in Mobile IoT Oct. 2016 to Oct. 2017

Supervised by Prof. Ruhui Ma (SJTU)
- Team leader in this project
- Proposed a novel detection scheme based on cloud computing against Sybil attack in IoT

HONORS & AWARDS

Wish Company Scholarship (**Top 2%**)	2018
Academic Excellence Scholarship of Shanghai Jiao Tong University (**Top 10%**)	2016&2018
Excellent Student Cadre of Shanghai Jiao Tong University (**Top 0.5%, twice**)	2016&2017
National Second Prize in Mathematical Contest in Modeling (**Top 5%**)	2017
4th Place in Odyssey of the Mind Competition Finals in Iowa, USA	2018

MISCELLANEOUS

Social work
- President of Building Management Committee in SJTU, Class Monitor

Skills
- Computer Skills: C++/C, Python, SQL, Pytorch, Springboot, Latex
- Standardized Tests: TOFEL: 96, GRE: 321 (V: 152, Q: 169, AW: 3)