YANHUI WANG

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EDUCATION

University of Southern California, Los Angeles, the U.S Jan 2021 - Dec 2022
MS in Electrical Engineering *GPA: 3.7/4*

· Core Coursework: Machine Learning, Parallel & Distributed Computation, Programming System Design

Sichuan University, Sichuan, China Sept 2015 - June 2019
B.Eng. in Medical Information Engineering *86.83/100*

· Core Coursework: Artificial intelligence Application, Computer Software Technology, Digital Image Processing

WORK EXPERIENCE

Leadmove Technology, Shanghai, China Oct 2019 - Dec 2020
Software Engineering Intern

· Designed post-processing algorithms for lane detection, optimized the lane segmentation result and achieved visualization based on OpenCV and C++;
· Implemented traffic sign classification with 94% accuracy in a lightweight separable convolution method by PyTorch and dependencies like numpy, scikit-image;
· Led the research on the latest parking slot detection algorithms, optimized the algorithm based on DCNN approach, designed and implemented annotation tool based on internal demand by Python and TKinter;
· Built backend infrastructure using Python and Flask for data management, optimized the data uploading and downloading process, visualized the annotation with the raw data.

ACADEMIC EXPERIENCE

Undergraduate Research Assistant: Sichuan University Nov 2017 - Jan 2019

· Conducted literature research on nonlinear structured illumination imaging(SIM);
· Simulated nonlinear SIM imaging process and implemented reconstruction algorithm using Matlab;
· Analyzed signal-noise rate on the image results in nonlinear SIM and improved the image quality using deconvolution algorithms,
· Evaluated the performance of 1D and 2D illumination patterns using simulations in Matlab;
· Patent: A Double-Nonlinear-Effect-Based Structured Light Imaging Device (Patentee: Sichuan University);
· Co-authored conference paper: Super-resolution Imaging by Two-photon Structured Illumination Microscopy, DES-tech Transactions on Computer Science and Engineering; Super-resolution imaging in thick scattering samples by structured illumination microscopy with dual nonlinear effects, accepted by the 5th advanced optical imaging technology and application symposium of China.

National Undergraduate Innovation Design Contest: Biomedical Engineering Apr - July 2018

· Developed an Android application in Java to visualize a human heart rate data feed using bluetooth;
· Continuous small amplitude electrocardiographic data collected via single axis tilt sensor, and transferred in real time using a bluetooth chip based on SPI communication;
· Designed algorithms for wavelet threshold denoising and band-pass filtering which allowed the team to identify the wave peak of the BCG signals and deduce the appropriate heart rate value;
· Won the third prize of the national contest.

TECHNICAL STRENGTHS

Programming Languages: C++, Python, Java, Matlab

Framework & Tools: Linux, Anaconda, OpenCV, PyTorch, TensorFlow, OpenMP