SHENGTING (STEVEN) CAO

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EDUCATION

The University of Alabama, Tuscaloosa, AL — Aug. 2019 - May 2023 (expected)
Ph.D. in Electrical Computer Engineering (ECE), GPA: 3.88/4.0
Research focus: Computer Vision & Deep Learning

The University of Alabama, Tuscaloosa, AL — Jan. 2016 - May 2019
B.S. in Computer Science (CS), GPA: 3.71/ 4.0
Minor: Advertising

EXPERIENCE

The University of Alabama, Tuscaloosa, AL — May 2019 – Present
Research Assistant

Intelligent treadmill project

- Designed a self-supervised intra-gait classification neural network to predict the current walking gait that achieves 98% progression accuracy on 34 testing subjects
- Integrated server-client TCP control and real-time classification output to Bertec and KineAssist treadmill that makes the single-belt treadmill (~$1k) achieves comparable functionality as split-belt treadmill (~$400k) for post-stroke patient rehabilitation

Biomedical image processing projects

- Developed a software to auto detect the saturation artifacts according to spectrum information of (Optical Coherence Tomography) OCT images
- Developed a Super Resolution Generative Adversarial Network (SR-GAN) to increase both optical and digital resolution of human coronary OCT images

Body information retrieve project

- Developed an Android app to measure the height, waistline, and hipline of human by taking a picture of them

Mercedes-Benz U.S. International, Vance, AL — Jan. 2019 – May 2019
Research Intern

Method Time Measurement (MTM) for well-trained assembly line workers

- Divided assembly process into basic operations related to MTM code defined by Mercedes-Benz manufacture standard
- Rendered the human motion trajectory in Unity3D and auto detect if human joints motion is overlapped with predefined series of virtual bounding boxes
- Designed a graphical user interface for manager to customize the bounding box with different MTM code

Gongbing Technology, Shenzhen, China — May 2018-August 2018
Software Development Intern

Add-on features for an eyeglasses management and inventory system on iPad

- Extracted the landmark of human face and superimpose a virtual eyeglass to the face for preview purpose
- Added the voice recognition feature to the search bar of the app

PATENT

Real-Time, Fine-Resolution Human Intra-Gait Pattern Recognition Based on Deep Learning Models (proved for filling)
Simulating a Split-Belt with a Single-Belt Treadmill (proved for filling)

SKILLS

|| C || C++ || Python || TensorFlow||Keras ||MATLAB|| PyTorch ||C# ||Java || JavaScript || PHP || SQL||NoSQL||
||Ladder Logic||ScadaBR||Arduino Uno||Android||iOS||Google Cloud|| AWS||Scheme||