Xiaoyu Ji

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EDUCATION

- **Purdue University** — West Lafayette, IN, USA
  M.S. in Electrical and Computer Engineering — *August 2019 - May 2021*
  - **Major**: Communications Networks and Signal and Image Processing
  - GPA: 3.87/4.00
- **University of Electronic Science and Technology of China (UESTC)** — Chengdu, Sichuan, CHINA
  B.Eng in Yingcai Honor College — *September 2015 - July 2019*
  - **Major**: Electronic Information Engineering
  - GPA: 3.92/4.00

RESEARCH EXPERIENCE

- **Seed Based Functional Connectivity Analyses of Resting State MRI** — Purdue University
  Master Thesis — *May 2020 - now*
  - Analyzed pre-season and post-season Resting State MRI of middle school football player.
  - Completed brain extraction of scans from GE Discovery MR750 3T Scanner.
  - Implemented seed based correlation based on posterior cingulate, yeo network and shen278 parcellations.
  - Dissected acceleration impact data and Functional Connectivity correlation matrix.
  - Took advantage of AFNI, FSL and MATLAB language.
- **Image Compressed Sensing based on Deep Learning** — UESTC
  Bachelor Thesis — *January 2019 - June 2019*
  - Reconstructed both common pictures and MRI images with convolutional neural network.
  - Built main neural network with residual structure, based on Iterative Soft-Thresholding Algorithm.
  - Improved quality of reconstructed images with BM3D denoiser.
  - Took advantage of tensorflow structure and Python language.
- **Reflection Removal by Convolutional Neural Network** — UESTC
  April 2018 - September 2018
  - Collaborated with teammate and advisor, took cs231n course for preparation.
  - Eliminated noise in photos taken through glass windows with neural network.
  - Built Fully Convolutional Network with dilated convolution as main network.
  - Selected VGG19 hypercolumn features as a supplement of input images.
  - Enhanced credibility of synthetic images with Conditional Generative Adversarial Networks.

WORK EXPERIENCE

- **Graduate Teaching Assistant** — Purdue University
  Electrical Engineering Fundamentals II — *June 2020 - December 2020*
- **Yellow Lane Detection of AGV with Hough Transformation** — Small Donkey Robot Company
  Image Processing Intern — *July 2018 - August 2018*
  - Contributed in computer vision design of industrial robot(AGV model).
  - Created lane detection design with Hough Line Transform, extracted yellow path of video signal.
  - Refined output with binary image morphological processing and generated bird-eye view.
  - Utilized Opencv, Robot Operating System (ROS) and C++ language.

SKILLS

- **Programming Languages**: C, C++, Python, MATLAB, VHDL
- **Tools**: Tensorflow, AFNI, Opencv