Siqin Li

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OBJECTIVE

Seeking a challenging position as a software engineer in the area of deep learning and computer vision.

EDUCATION

University of Maryland — College Park, MD
Master of Science in Electrical and Computer Engineering — Expected May 2018

Eastern New Mexico University (2+2 Program) — Portales, NM
Bachelor of Science in Electronic Engineering Technology — May 2015

- With Distinction

University of Electronic Science and Technology of China — Chengdu, China
Bachelor's Degree in Electronic Science and Technology — May 2015

- Second-class People's Scholarship, 2013
- First-class People's Scholarship, 2012

RELEVANT COURSES

- **Computer Vision:** Digital Image Processing, Image Understanding, Computer Processing of Pictorial Information
- **Signal Processing:** Random Processes, Estimation and Detection Theory, Advanced Digital Signal Processing, Information Theory, Digital Communication

RESEARCH EXPERIENCE

Current Research — College Park, MD

Action Recognition in Surveillance Video — Jan 2018 – Now

- Human Pose Tracking
- Action Detection
- Skeleton based action recognition

Master Thesis — College Park, MD

Gesture-Controlled Drone — Jan 2017 - Nov 2017

Develop the Human Robot Interaction pipeline on drones which can be controlled by human body language such as gestures representing desired actions to be performed by the drone.

- Human pose RGB-D video based data collection
- RGB body skeleton and hand skeleton detection using machine learning methods (Support Vector Machine)
- Human action and gesture recognition using novel Convolutional Neural Network (Res-TCN + Multi-models)
- Simulation on ROS where a drone running the same flight controller using the gestures recognized

Course Projects — College Park, MD

3D model reconstruction and segmentation — May 2017

- Extracted object of interest from table top RGB-D images
- Implemented ICP algorithm to reconstruct complete 3D point cloud model
- Segmented the scene of objects collection with color code
- Built a semantic map, derived the relationships between the segmented objects

Structure from Motion — April 2017

- Implemented a reconstruction of 3D scene based on images
- Obtained the monocular camera poses with respect to this scene

Panorama Stitching — March 2017

- Implemented an end-to-end pipeline to do image panorama stitching of unordered images
- Designed an algorithm to blend images to get seamless panorama

Face Swapping — March 2017

- Successfully detected and seamlessly swapped faces in a video using two different warping techniques
- Applied low pass filter temporally to reduce flickering

WORK EXPERIENCE

University of Maryland — College Park, MD

Research Assistant — January 2018 – Now

- Working in Computer Vision Lab and Autonomy Robotics Cognition Lab under the guidance of Prof. Yiannis Aloimonos and Dr. Cornelia Fermuller.

Eastern New Mexico University — Portales, NM

Supplemental Instructor — August 2014 - May 2015

- Instructed the class when necessary
- Provided on-going assistance to students and helped them improve their academic performance
- Supervised students during lab hours

SKILLS

- *Language & Software*: MATLAB, C/C++, Python (Keras, Numpy, OpenCV), SQL
- *Operating Systems*: Linux, MacOS, Windows
- *Others*: ROS, TensorFlow, Caffe