CHUNHUI LIU

Master Student in Computer Vision, Carnegie Mellon University

RESEARCH EXPERIENCE

Applied Scientist Intern Amazon AWS Rekognition

May 2019 - Aug 2019

Seattle, WA, U.S.A

Spatial Temporal Action Localization

- Design a balanced training scheme to deal with long-tail action data.
- Design a deep index module to modeling temporal information selection. <Caffe2 in Python>

Research Assistant

Wangxuan Institute of Computer Technology, Peking University

Peijing, China

Advisor: Jiaying Liu, Associate Professor, PKU

Skeleton-based Action Recognition and Online Detection

- Proposed a LSTM-based Temporal Perceptive Network with shortterm kernel to capture detailed action feature. This method win the ACCV2016 skeleton-based action recognition workshop. < Keras>
- Proposed a LSTM-based online network to detect action intervals and forecast action occurrences synchronously. <Lasagne in Python>
- Built a largest skeleton-based action dataset for continues action detection, which was used for IEEE ICME 2017 workshop.
- Published 3 paper in <u>ACM Multimedia W 2017</u>, <u>BMVC 2017</u>, and <u>ICASSP 2017</u> (2 first author, 1 second author); Filed one pendingpatent in China. (first author)

Research Summer Intern

Robotics Institute, Carnegie Mellon University

🛗 Jun. 2017 - Sep. 2017

Pittsburgh, PA, U.S.A

Advisor: Deva Ramanan, Associate Professor, CMU

 Proposed a pixel-wise non-parametric method to interpret pixelwised CNNs based on Nearest Neighbors. <u>Technical Report</u> < Tensorflow in Python>

SELECTED PROJECTS

Embedded Pedestrian Tracking and Detection Carnegie Mellon University, Capstone Project

Feb 2019 - Ongoing

Advisor: Kris Kitani, Associate Research Professor, CMU

Developed a real-time pedestrian tracking system, <u>MoSiamRPN</u>.

Mixed-Reality Educational System for Children NoRILLA

Feb 2019 - Aug 2019

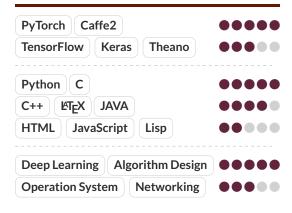
Advisor: Nesra Yannier, Postdoctoral Fellow, CMU

• Developed vision module for <u>NoRILLA</u> education system, a patented mixed-reality educational system bridging physical and virtual worlds to improve STEM learning for children in primary schools.

SELF INTRODUCTION

I have experience in modeling human in the world using computer vision and machine learning techniques. My previous work mainly focused on skeleton-based action recognition, online action detection, spatial-temporal action localization, and pedestrian tracking. I am also familiar with Generative Adversarial Networks, Object Detection, Weakly Supervised / Unsupervised Learning, Visual Question Answering.

SKILLS



EDUCATION

M.Sc. in Computer Vision Carnegie Mellon University

Aug. 2018 - Dec. 2019

Pittsburgh, U.S.A

- GPA: 4.17/4.0

B.Sc. in Computer Science, Summa Cum Laude

Peking University

🛗 Sep. 2014 – Jun. 2018

♀ Beijing, China

- GPA: 3.59/4.0
- Outstanding Graduation Award of Beijing
- Excellent Research Award of Peking University
- Outstanding Student Award of Peking University

PRIZE



ACCV Workshop Winner

Large Scale 3D Human Activity Analysis Challenge in Depth Videos, 2016



Meritorious Prize

The Mathematical Contest in Modeling (MCM), U.S.A, 2016



Bronze Prize

National Olympiad in Informatics (NOI), China, 2013