Songyang Zhang

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Education

University of Rochester, USA   **Aug.2018 – Present**
- ❖ PhD Student in Computer Science, Advisor: Jiebo Luo

Zhejiang University, China   **Sep.2015 – Mar.2018**
- ❖ Master of Science in Computer Science and Technology
- ❖ Overall GPA: 3.56/4.00 (86.84/100)

Southest University, China   **Aug.2011 – Jun.2015**
- ❖ Bachelor of Engineering in Computer Science and Technology
- ❖ Rank: 15th of the cohort (among 132 students)

Publications & Research Papers

- ❖ **Songyang Zhang**, Linfeng Song, Lifeng Jin, Dong Yu, Jiebo Luo, "Video-aided Unsupervised Grammar Induction", In Review

- ❖ **Songyang Zhang**, Houwen Peng, Jianlong Fu, Yijuan Lu, Jiebo Luo, "Multi-Scale 2D Temporal Adjacent Networks for Moment Localization with Natural Language", In Review

- ❖ **Songyang Zhang**, Tolga Aktas, Jiebo Luo, "Mi YouTube es Su YouTube? Analyzing the Cultures using YouTube Thumbnails of Popular Videos", In Review

- ❖ Li Sun, Haoqi Zhang, **Songyang Zhang**, Jiebo Luo, "Content-based Analysis of the Cultural Differences between TikTok and Douyin", IEEE Big Data, 2020

- ❖ **Songyang Zhang**, Houwen Peng, Jianlong Fu, Jiebo Luo, " Learning 2D Temporal Adjacent Networks for Moment Localization with Natural Language", AAAI, 2020

- ❖ **Songyang Zhang**, Houwen Peng, Le Yang, Jianlong Fu, Jiebo Luo, " Learning 2D Temporal Adjacent Networks for Temporal Action Localization", HACS Temporal Action Localization Challenge at ICCV'19 (Technical Report)

- ❖ **Songyang Zhang**, Jinsong Su, Jiebo Luo, "Exploiting Temporal Relationships in Video Moment Localization with Natural Language", ACM Multimedia, 2019

- ❖ **Songyang Zhang**, Xiaoming Liu, Jun Xiao, "On Geometric Features for Skeleton-Based Action Recognition Using Multilayer LSTM Networks", WACV, 2017

- ❖ **Songyang Zhang**, Jun Xiao, Xiaoming Liu, Yang Yi, Yueting Zhuang, "Fusing Geometric Features for Skeleton-Based Action Recognition using Multilayer LSTM Networks", IEEE Transactions on Multimedia, 2017

- ❖ Jiageng Feng**, Songyang Zhang**, Jun Xiao, "Explorations of skeleton features for LSTM-based action recognition", Multimedia Tools and Applications, 2017

Research Experience

PhD Researcher, University of Rochester   **Aug.2018 - Present**

Project: **Moment Localization via Natural Language**
- ❖ This task aims to temporally find related videos moments by a given sentence.
- ❖ We propose a novel 2D Temporal Adjacent Network (2D-TAN). The core idea is to retrieve a moment on a two-dimensional temporal map, which considers adjacent moment candidates as the temporal context.

Project: **Temporal Action Localization**
- ❖ This task aims to classify and localize the action segments from long, untrimmed videos.
- ❖ We extend our 2D-TAN approach to this task and win the 1st place in HACS Challenge at ICCV 2019.

Project: **Cultural Analysis via Web Videos**
- ❖ This task focus on comparing video content uploaded by users form different countries.
- ❖ We analyze and compare video content through modern object detection, action recognition tools.

Master Researcher, Zhejiang University   **Sep.2015 – Mar.2018**
Project: **Skeleton-Based Action Recognition**
- ❖ This task aims to classify skeleton sequences.
- ❖ We propose a multi-stream LSTM architecture with a new smoothed score fusion technique to learn classification from different geometric feature streams.

Project: **Skeleton-Based Action Detection**
- ❖ This task aims to classify and localize the action segment from long, untrimmed skeleton sequences.
- ❖ We generated temporal region proposals with motions using the snippet network, classified the proposals into different categories with activity network.

Undergraduate Researcher, Robocup Lab, Southeast University   **Jan.2013 – Oct.2014**
Project: **RoboCup 3D Simulation**
- ❖ Aimed to improve the robot's long distance kicking skill
- ❖ Optimized the joint positions and the time lag via hill-climbing algorithm based on the initial model frame

Professional Experience

Intern, Tencent AI Lab, Seattle   **May.2020 – Aug.2020**
- ❖ Mentor: Linfeng Song
- ❖ Topic: Video aided Unsupervised Grammar Induction

Intern, Microsoft Research Asia, Beijing   **May.2019 – Aug.2019**
- ❖ Mentors: Houwen Peng, Jianlong Fu
- ❖ Topic: Moment Localization with Natural Language

Intern, Tencent AI Lab, Shenzhen   **Mar.2018 – Aug.2018**
- ❖ Mentors: Lin Ma, Linchao Bao
- ❖ Topic: Temporal Action Localization

Honors & Awards

HACS Temporal Action Localization Challenge at ICCV 2019, Rank 1   **Oct. 2019**
Project Prizes - Large Scale 3D Human Activity Analysis Challenge in Depth Videos
- ❖ Rank 4 in Recognition Track, 6 in Detection Track, granted by ICME 2017 Workshop   **Apr.2017**
- ❖ Rank 6, granted by ACCV 2016 Workshop   **Oct.2016**

Project Prizes – Robocup 3D Simulation
- ❖ Champion, RoboCup China Open 2014 Competition   **Oct.2014**
- ❖ Rank 5~8, Robocup 3D Simulation, Robocup 2014 Competition, Brazil   **Jul.2014**