

Pengzhan Sun

(+86) 176 1436 1725 pengzhansun6@gmail.com <https://pengzhansun.github.io/>

EDUCATION

Senior Undergraduate, Mathematics-Physics Fundamental Science (Artificial Intelligence Specialization), YINGCAI Honors College, University of Electronic Science and Technology of China (2018.08 – present)

- Grade: 3.9 / 4.0 (GPA) | 58 / 65 Full-Score 4.0 courses
- Award: First-class Outstanding Student Scholarship (2/23)

SELECTED RESEARCH EXPERIENCES

Data Intelligence Group, UESTC joint with MIT-IBM Watson AI Lab (2020.10 – present)

Co-worked with Profs. [Wen Li](#) & [Lixin Duan](#), [Principle Research Staff Chuang Gan](#) and [Postdoctor Bo Wu](#)

- **Counterfactual Debiasing Inference for Compositional Action Recognition**
 - Aimed to improve the model generalization ability by removing the interference introduced by biased visual appearances in compositional action recognition inspired from a causal view
 - Proposed leveraging a prior causal graph structure to learn a video representation and then remove the appearance bias effect on the final classification using counterfactual inference
 - Achieved in better recognizing unseen action instances by debiasing the effect of appearances
 - Accepted by the 29th ACM International Conference on Multimedia (ACM MM 2021), poster
- **Beyond What You Have Seen: Pseudo Composition Inference for Compositional Action Learning**
 - Focused on exploring the composition property between objects and actions and utilize that to learn better recognition ability of compositional actions
 - Devised a novel training scheme, called Pseudo Composition Inference framework, to construct pseudo compositions through recombining the visual representations of motions or objects
 - Achieved a more robust prediction when encountered with unseen objects by feeding the pseudo compositions into the action classifier
 - Submitted to the Conference on Computer Vision and Pattern Recognition (CVPR 2022), under review

PUBLICATIONS

- [Pengzhan Sun](#), Bo Wu, Xunsong Li, Wen Li, Lixin Duan, Chuang Gan, “Counterfactual Debiasing Inference for Compositional Action Recognition” in ACM MM, Oct 2021.
- Xunsong Li, Bo Wu, [Pengzhan Sun](#), Wen Li, Lixin Duan, “Beyond What You Have Seen: Pseudo Composition Inference for Compositional Action Learning” under review in CVPR 2022.

ADDITIONAL EXPERIENCES

- **ACM International Conference on Multimedia, Chengdu, China, Session Staff Volunteer (2021.10)**
 - Received Volunteer Appreciation Certification in the 2021 ACM Multimedia for joining the organization
- **Introduction to Artificial Intelligence, UESTC, Teaching Assistant (2021.4 – 2021.6)**
 - Mainly responsible for course slides and projects design of Reinforcement Learning
- **National University of Singapore Innovation Management Visiting Training Project (2019.8)**
 - Completed the Innovation Management Programme (4 credits) from Department of Industrial Systems Engineering and Management in National University of Singapore
 - The 1st price in innovation and entrepreneurship competition held by iSpace Innovations Asia Pacific
 - Received a recommendation letter from iSpace Innovations Asia Pacific

OTHER SKILLS

- **Programming Languages:** [Recently Used] Python, PyTorch; [Have Experience Before] C, R, SQL, MATLAB
- **Languages:** Chinese (native), English (IELTS: 7.0)