

# YONGFEI LIU

Computer Vision, Machine Learning, Deep Learning  
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## EDUCATION

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**ShanghaiTech University** (postgraduate recommendation) **Shanghai China**  
School of Information Science and Technology, Ph.D in Computer Science *Sep. 2017 - Present*  
Advisor: Prof. Xuming He, Major in Computer Vision & Machine Learning

**XIDIAN University** **Xi'an China**  
School of Telecommunications Engineering, B.S. in Telecommunications Engineering *Sep. 2013 - Jun. 2017*

## SKILL

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**Research Interest:** Integration of Vision and Language, Commonsense Reasoning, Semi/Weakly-supervised Learning, Few-shot Learning, Medical Image Analysis.  
**Programming:** Python(PyTorch, TensorFlow), C++, Matlab  
**Courses:** Deep Learning, Machine Learning, Digital Image Processing

## AWARDS AND HONORS

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Outstanding Teaching Assistant of ShanghaiTech University(**CS280 DeepLearning**) *Nov.2018 - Jan.2019*

## WORK EXPERIENCE

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**Tencent AI Lab** Collaborate with **Lin Ma** **Shenzhen**  
Research Intern *May. 2020 - Now*

**ShanghaiTech University School of Information Science and Technology** **Shanghai**  
· High Performance Cluster(HPC) **DevOps Assistant** *May. 2018 - May. 2019*

**ShanghaiTech University School of Information Science and Technology** **Shanghai**  
· **Deep Learning Teaching Assistant** *Nov. 2018 - Jan. 2019*

## PUBLICATIONS

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**Part-aware Prototype Network for Few-Shot Semantic Segmentation** *Mar. 2020*  
*Yongfei Liu\**, Xiangyi Zhang\*, Songyang Zhang, Xuming He  
Accepted by **ECCV-2020**,

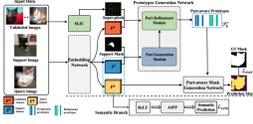
**Learning Cross-modal Context Graph for Visual Grounding** *Nov. 2019*  
*Yongfei Liu\**, Bo Wan\*, Xiaodan Zhu, Xuming He  
Accepted by **AAAI-2020**

**Pose-aware Multi-level Feature Network for Human Object Interaction Detection** *Mar. 2019*  
*Bo Wan\**, Desen Zhou\*, *Yongfei Liu*, Rongjie Li, Xuming He  
Accepted by **ICCV-2019**

**An Interpretable Multi-scale Deep Network for Structure Localization in Medical Images** *Mar. 2019*  
*Yongfei Liu*, Bo Wan, Xuming He  
arxiv preprint,

## RESEARCH EXPERIENCES

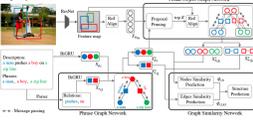
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### Part-aware Prototype Network for Few-Shot Semantic Segmentation

research project, ShanghaiTech, Dec. 2019

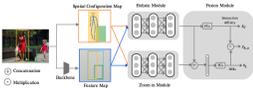
- Proposed a novel setting for semi-supervised few-shot segmentation.
- Utilize amount of unlabeled images to update prototype representation.
- Using label propagation to pass labels from support images to unlabeled images.



### Learning Cross-Modal Context Graph for Visual Grounding

research project, ShanghaiTech, July. 2019

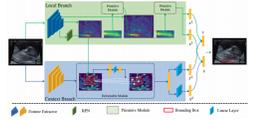
- Formulate the visual grounding problem as graph matching from language to image.
- Utilize external parser to explicitly parse language scene graph from sentence description.
- Use language scene graph structure to guide visual graph construction.



### Pose-aware Multi-level Feature Network for Human Object Interaction

research project, ShanghaiTech, Mar. 2019

- Utilize human-pose information to help fine-grained human object interaction detection.
- Model the relationship between human parts and objects
- Propose multi-level fusion strategy to improve the classification accuracy.



### An Interpretable Multi-scale Deep Network for Structure Localization in Medical Images

research projects, ShanghaiTech, Feb. 2019

- Propose Context branch to capture context information based Deformable RoI Pooling
- Propose voting mechanism for localization by visual concept, which can integrate explanation property
- Combine two branches can outperform the baseline methods

## ACADEMIC SERVICE

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Reviewer of **IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)**

Reviewer of **ECCV-2020**

Reviewer of **ACMMM-2020**