

Xiaoqiang Wang

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EDUCATION

Zhejiang University, College of Computer Science and Technology

Hangzhou, China

Master of Science in Computer Science

Sep 2020 - Now

Supervisor: Siliang Tang and Yueting Zhuang

Zhejiang University, Member of Mix Class, Chu Kochen Honors College

Hangzhou, China

Bachelor of Engineering in Computer Science

Sep 2016 - Jul 2020

GPA: Major GPA: 3.90/4.0, top 1%; Overall GPA: 3.88/4.0. top 3%

PUBLICATIONS

- S³Net: Self-supervised Self-ensembling Network for Semi-supervised RGB-D Salient Object Detection, T-NNLS under review
- Dual-Semi RGB-D Salient Object Detection, CVPR'21 under review

RESEARCH EXPERIENCE

Department of Computer Science and Engineering, The Chinese University of Hong Kong

Hong Kong, China

Research Assistant, Supervisor: Pheng Ann Heng

Sep 2019 - Feb 2020

- **Medical Imaging Segmentation:**
 - Designed a general U-Net architecture adaptive to different datasets of medical imaging segmentation by considering both data statistics and computation cost.
 - Won the **7-th place** (on Nov 2019) over 200+ teams in the 2019 Kidney Tumor Segmentation Challenge (KiTS19).
- **Hierarchical Graph Matching Network for Graph Similarity Computation:**
 - Proposed a hierarchical pipeline to match two graphs in multiple stages based on spectral clustering and **graph eigen-pooling**.
 - During hierarchical matching, **aligned the two graphs explicitly** by employing optimal transportation.
 - Achieved superior performance against state-of-the-arts such as GraphSIM, GMN and SimGNN and submitted a **KDD'20 paper** (rejected).
- **S³Net: Self-supervised Self-ensembling Network for Semi-supervised RGB-D Salient Object Detection:**
 - Devised a **spatially adjacent fusion** module to fuse features from not only different resolutions but also different modalities (i.e. RGB and depth images).
 - Employed **unlabeled RGB-D data** with self-supervision to regularize the supervised training.
 - Submitted a **T-NNLS paper** (under review).

Digital media Computing & Design Lab, Zhejiang University

Hangzhou, China

Master Student, Supervisor: Siliang Tang and Yueting Zhuang

Sep 2020 - Now

- **Dual-Semi RGB-D Salient Object Detection:**
 - Decoupled depth-aware cues from input RGB images and **estimate depth maps** to boost saliency detection.
 - Incorporated highly available **unpaired unlabeled data** (i.e. RGB images only) in a creative way.
 - Outperformed all state-of-the-arts of ECCV'20 and submitted a **CVPR'21 paper** (under review).

TECHNICAL STRENGTHS

- **Research Interests:** Multi-modality Analysis, Computer Vision, Graph Neural Networks(GNN)
- **Languages & Frameworks:** C/C++, Python, Java, Golang, SQL, MATLAB, JavaScript, PyTorch, TensorFlow, OpenCV, Hadoop

HONORS

- **First-Class Scholarship for Outstanding Merits (Top 10%):** 2017
- **Undergraduate Outstanding Dissertation of Zhejiang University:** 2020

SELECTED COURSES

All 4.0/4.0

- **AI:** Artificial Intelligence, Introduction to Data Mining, Computer Vision, Big Data Theory
- **Theory:** Theory of Computation, Advanced Data Structure & Algorithm Analysis
- **Systems:** Operating Systems, Computer Architecture, Computer Networks, Computer Organization
- **Math:** Probability and Mathematical Statistics, Linear Algebra, Mathematical Analysis