

ZUYAO CHEN

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EDUCATION

- Jan. 2022 – present* Phd student supervised by Prof. Changwen Chen at **The Hong Kong Polytechnic University (PolyU)**.
- Sep. 2017 – June 2020* Master of Philosophy degree in Computer Science at **University of Chinese Academy of Sciences (UCAS)**. His research interests include computer vision and deep learning, supervised by Prof. Qingming Huang.
- Sep. 2013 – June 2017* Bachelor's degree in Automation at **University of Electronic Science and Technology of China (UESTC)**, Chendu, China
major GPA: **89.31/100** Rank: **4% (8/209)**

PUBLICATIONS

- **Zuyao Chen**, Jinlin Wu, Zhen Lei, Zhaoxiang Zhang, Changwen Chen. “GPT4SGG: Synthesizing Scene Graphs from Holistic and Region-specific Narratives”. preprint
- **Zuyao Chen**, Jinlin Wu, Zhen Lei, Zhaoxiang Zhang, Changwen Chen. “Expanding Scene Graph Boundaries: Fully Open-vocabulary Scene Graph Generation via Visual-Concept Alignment and Retention”. In ECCV, 2024 (**Oral, Best Paper Candidate**).
- **Zuyao Chen**, Qianqian Xu, Runmin Cong, and Qingming Huang. “Global Context-Aware Progressive Aggregation Network for Salient Object Detection”. In AAAI, 2020 (**Oral**).
- **Zuyao Chen**, Runmin Cong, Qianqian Xu, and Qingming Huang. “Depth Potentiality-Aware Gated Attention Network for RGB-D Salient Object Detection”. IEEE Transactions on Image Processing (IEEE TIP, Highly Cited Papers), 2021. (**ESI Highly Cited Paper**)
- Qianqian Xu, Zhiyong Yang, **Zuyao Chen**, Yangbangyan Jiang, Xiaochun Cao, Qingming Huang, and Yuan Yao. “Deep Partial Rank Aggregation for Personalized Attributes”. In AAAI, 2021.

ACADEMIC ACTIVITIES

- The winner of the STAR Challenge 2022 (ECCV workshop)
- Reviewer of ICPR, Signal and Image Processing, Neural Processing Letters, Multimedia Systems, IEEE TCSVT

RESEARCH EXPERIENCES & PROJECTS

- Jun. 2020 – Dec. 2021* **Full-time Engineer at SMartMore** *Shenzhen*
deep learning algorithms training, inference
responsible for industrial products' defect detection, and build the tool-chains including training semantic segmentation, model inference acceleration via quantization, high-performance tools via CUDA.
- Dec. 2019 – June.2020* **Intern at the SLAM group, Megvii** *Beijing*
working on deep learning
build a codebase for semantic segmentation, especially human segmentation for robots' obstacle avoidance, including training the network using distributed machines and speed up the inference stage via CUDA and TensorRT.

- Sep.2019– **Depth Potentiality-Aware Gated Attention Network for RGB-D Salient Object Detection**
- Nov.2019 *first author, advised by Prof. Qingming Huang* *ICT, UCAS*
 This work aims at addressing the two main problems in RGB-D Salient Object Detection (SOD), i.e., how to efficiently integrate multi-modal information, and how to prevent the contamination from the unreliable depth map. The proposed approach outperforms 15 state-of-the-art methods on 8 benchmark datasets.
- Jun.2019– **Global Context-Aware Progressive Aggregation Network for Salient Object Detection**
- Sep.2019 *first author, advised by Prof. Qingming Huang* *ICT, UCAS*
 We propose a novel network for SOD, which integrates low-level features, high-level features, and global context information in an interweaved way. Moreover, we introduce the global context information in a parallel way, which benefits the deducing of relationship among different salient regions and alleviates the feature dilution process. The proposed method outperforms 12 state-of-the-arts on 6 benchmark datasets.
- Nov.2018– **Intern at the Computer Vision and Multimedia Lab of JD AI Research**
- Dec.2018 *advised by Dr. Hailing Shi* *Beijing*
- Became familiar with the algorithms and test protocols of face recognition, reproduced the best current (2018) recognition algorithms(ArcFace, CosFace, etc.), achieving 99.80% accuracy on LFW.
 - Wrote a patent for face data cleaning and applied it to the integration of face datasets collected from unmanned supermarkets.

AWARDS

- 2017 – 2017 **Excellent Bachelor's Thesis Award**
- 2017 – 2017 **Outstanding Graduates of UESTC**
- 2016 – 2016 **Best Award for the Embedded Hardware Design** in the RoboMasters Summer Camp of SZ DJI Technology Co., Ltd.
- 2015 – 2016 **Runner-up and Best Technology Award** in the National trials for the 15th ABU Robocon Contest
- 2014 – 2015 **the First Prize** in the 10th Freescale Cup Intelligent Car Racing Competition for Undergraduates, west zone, China
- 2015 – 2016 Recipient of **National Inspirational Scholarship**
- 2013 – 2014 Recipient of **the First-class Scholarship**

SKILLS

familiar with C/C++, PYTHON, LINUX, \LaTeX

familiar with deep learning frameworks like CAFFE, PYTORCH and CUDA programming

experience in hardware and software design