Tianyu Hua

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EDUCATION

China University of Geosciences (Beijing) **Beijing, CHINA**
Bachelor of Computer Science, GPA: 89.19/100 (TOP 5%) Sep.2016-Jun.2020

Core Courses: Computer Networks, Data Structure, Operating System, Computer Graphics, Computer Organization and Architecture, Embedded System, Network Security

Awards: Professional A-level Scholarships for four consecutive times

Queen's University **Ontario, CANADA**
Exchange Student Jan. 2019-May 2019

Courses: Artificial Intelligence, Artificial Neural Network

Honor: National Scholarship for studying abroad in 2018

RESEARCH

Tsinghua University, IIIS Multimodal Group **Shanghai, CHINA**
Research Assistant; Supervisor: Prof. Hang Zhao Expected in Jun 2021

- Submitted the paper *Unsupervised Image Segmentation with Contrastive Instance Distancing* as the first author to **CVPR2021** (under review).
- Open sourced the code for paper Simsiam/BYOL/SimCLR/SwAV on GitHub

JD AI Research, CV Lab **Beijing, CHINA**
Research Intern; Supervisor: Dr. Yalong Bai Jan. 2020-Aug. 2020

- Research paper *Relationship Matters for Multi-objects Image Generation* accepted by **AAAI 2021**
- First Place in AliProducts Challenge: Large-scale Product Recognition at CVPR 2020
- Third Place in the iMet Collection Recognition Challenge at CVPR 2020 FGVC workshop
- Designed a novel mutual information adversarial training technique that will automatically segment objects in images.

Artificial Intelligence and Visual Analogical Systems Lab, Vanderbilt University **Nashville, TN**
Research Assistant; Supervisor: Prof. Maithilee Kunda Jul. 2019-Sept. 2019

- Proposed a framework that leveraged an inpainting algorithm trained on photorealistic object images from ImageNet and achieved a score of 27/36 on the Raven's Colored Progressive Matrices test which corresponds to the average performance of a nine-year-old child
- Finished the paper *Modeling Gestalt Visual Reasoning on the Raven's Progressive Matrices Intelligence Test Using Generative Image Inpainting Techniques* as the first author to target CogSci conference (Welcome to our Poster booth 3422 at the **CogSci 2020** Virtual Conference this summer)

Institute of Automation, Chinese Academy of Sciences (CASIA) **Beijing, CHINA**
Research Intern in National Laboratory of Pattern Recognition; Aug. 2017-Jul. 2018
Supervisor: Prof. Ran He

- Reproduced the experimental results of a paper on face completion with Generative Adversarial Networks (GAN)
- Tested whether unpaired geometry-face datasets would lead to good quality synthesized face images by applying cycle-GAN structure into geometry-guided face generation
- Designed and implemented a network structure through the improvement of the DR-GAN to reduce the discrepancy between frontal and side face images, which contributed to an increase in accuracy of 5% with the Multi-Pie dataset.

SKILLS

Programming Language: Python, Swift, C, C++, Dart, JavaScript, Java, Bash, MATLAB
Web Technologies: HTML, CSS, Servlets, NodeJS
Tools: AWS, GCP, Git, Docker, SQL
Frameworks: PyTorch, JAX, TensorFlow, Flutter, Flask