

Yuanzheng Ci

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Education

- Oct.2019 - present **Ph.D. in Engineering, EIE, The University of Sydney, Sydney, Australia.**
○ Supervisor: Prof. Wanli Ouyang and Prof. Luping Zhou
- Sep.2015 - Jun.2019 **B.E. in Software Engineering, ISE, Dalian University of Technology, Dalian, China.**
○ Rank: Freshmen & Sophomore: **1/96**, Junior: **1/64**, Cumulative GPA: **4.43/5**
○ Dual Degree: **B.A. in Japanese**

Research Interests

Foundation Models, Self-Supervised Learning, Neural Architecture Search, Controlled Image Synthesis

Publications

- CVPR UniHCP: A Unified Model for Human-Centric Perceptions.**
2023 Yuanzheng Ci*, Yizhou Wang*, Meilin Chen, Shixiang Tang, Lei Bai, Feng Zhu, Rui Zhao, Fengwei Yu, Donglian Qi, Wanli Ouyang (* equal contribution)
- CVPR HumanBench: Towards General Human-centric Perception with Projector Assisted Pretraining.**
2023 Shixiang Tang*, Cheng Chen*, Meilin Chen, Qingsong Xie, Yizhou Wang, Yuanzheng Ci, Lei Bai, Feng Zhu, Haiyang Yang, Li Yi, Rui Zhao, Wanli Ouyang (* equal contribution)
- Preprint FengWu: Pushing the Skillful Global Medium-range Weather Forecast beyond 10 Days Lead.**
2023 Kang Chen*, Tao Han*, Junchao Gong*, Lei Bai*, Fenghua Ling, Jing-Jia Luo, Xi Chen, Leiming Ma, Tianning Zhang, Rui Su, Yuanzheng Ci, Bin Li, Xiaokang Yang, Wanli Ouyang (* equal contribution)
- ECCV Fast-MoCo: Boost Momentum-based Contrastive Learning with Combinatorial Patches.**
2022 Yuanzheng Ci, Chen Lin, Lei Bai, Wanli Ouyang
- ICCV Evolving Search Space for Neural Architecture Search.**
2021 Yuanzheng Ci, Chen Lin, Ming Sun, Boyu Chen, Hongwen Zhang, Wanli Ouyang
- ACM MM User-Guided Deep Anime Line Art Colorization with Conditional Adversarial Networks.**
2018 Yuanzheng Ci, Xinzhu Ma, Zhihui Wang, Haojie Li, Zhongxuan Luo

Research Experience

- Jul.2018 - present **SenseTime Group Limited**, Beijing, China.
Research Intern
- **Human-Centric Foundation Model**
Built up codebase for large-scale multi-task pretraining with colleagues. Participated in constructing large-scale human-centric pretraining dataset. Proposed a unified model that handles a wide range of human-centric perceptions (ReID, pose estimation, human parsing, pedestrian detection, attribute prediction) in a simple feed-forward, end-to-end transformer model. The model shares 99.97% of its parameter across tasks/datasets, can handle all tasks simultaneously, and achieves new SOTAs on a wide range of benchmarks when jointly pretrained on 33 human-centric datasets and adapted to a specific downstream task. Two papers are accepted for publish on CVPR 2023.
 - **Self-Supervised Learning**
Proposed an efficient method for self-supervised learning that can achieve **74.7%** linear evaluation Top-1 accuracy on ImageNet with only 100 epochs of ImageNet pertaining, ResNet-50 backbone network, and negligible time overhead (on top of MoCo v3). Part of the proposed method is published on ECCV 2022.
 - **Neural Architecture Search**
Designed NAS codebase for FLOPs/parameter/latency constrained architecture search, also a contributor to the internal NAS toolchain and model zoo. Proposed a novel neural architecture search algorithm and search space that outperformed previous state-of-the-art methods. Produced 2 patents and published a paper on ICCV 2021.
- Dec.2016 - Jun.2019 **DUT Media Lab, Dalian University of Technology, Dalian, China.**
Research Assistant
- Proposed a model and a dataset for accurate anime line art colorization. This model significantly improved the visual result over the previously proposed methods. Also had experience with deep non-uniform blind motion deblur and GAN-based single image super-resolution. One paper was accepted by ACM MM 2018.

Jul.2016 **College of Information Science & Engineering, Ritsumeikan University, Kusatsu, Japan.**
Short Term Exchange Program

Awards, Scholarships and Patents

Awards and Scholarships

- Oct.2019 - **Research Training Program Scholarship (International)**, *Department of Education, Australian Government.*
Feb.2023
2021&22 **Postgraduate Research Support Scheme Scholarship**, *The University of Sydney.*
Jan.2019 **Outstanding Graduate of Liaoning Province (Top 3%)**, *The Educational Department of Liaoning Province.*
2016&17&18 **Learning Excellence Award (First Prize, Top 5%)**, *Dalian University of Technology.*
Dec.2018 **Lingshui Scholarship (Second Prize)**, *Dalian University of Technology.*
Nov.2018 **Excellence Award**, *International Entrepreneurship Contest for University Students, Hyogo, Japan.*

Patents

- 2020 **Evolving Search Space for Neural Architecture Search**, *Chinese Patent (Pending), ID: 202011273240.0.*
Yuanzheng Ci, Chen Lin, Wanli Ouyang, Ming Sun,
2019 **A Multi-Branch Approach for Resource Constrained Neural Architecture Search**, *Chinese Patent, ID: 201910457280.1.*
Yuanzheng Ci, Chen Lin, Wei Wu,
2018 **User-Guided Semantical Line Art Colorization**, *Chinese Patent, ID: 201810533325.4.*
Yuanzheng Ci, Haojie Li, Zhihui Wang and ZhongXuan Luo,

Skills

- Programming PYTHON(PYTORCH, NUMPY), L^AT_EX, LINUX, C/C++
Languages ENGLISH IELTS: 7.0 (L:8.0, R:8.5, W:6.0, S:6.0), JAPANESE JLPT N1: 150 (LK:44, R:60, L:46)