

Yuanzheng Ci

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Education

- Oct.2019 - **Ph.D. in Engineering**, *EIE, The University of Sydney*, Sydney, Australia.
present ○ Supervisor: Prof. Wanli Ouyang and Prof. Luping Zhou
- Sep.2015 - **B.E. in Software Engineering**, *ISE, Dalian University of Technology*, Dalian, China.
- Jun.2019 ○ 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

- Under Review **UniHCP: A Unified Model for Human-Centric Perceptions.**
Yuanzheng Ci*, Yizhou Wang*, Meilin Chen, Shixiang Tang, Lei Bai, Feng Zhu, Rui Zhao, Fengwei Yu, Donglian Qi, Wanli Ouyang (* equal contribution)
- Under Review **HumanBench: Towards General Human-centric Perception with Projector Assisted Pretraining.**
Shixiang Tang, Cheng Chen, Meilin Chen, Qingsong Xie, Yizhou Wang, **Yuanzheng Ci**, Lei Bai, Feng Zhu, Haiyang Yang, Li Yi, Rui Zhao, Wanli Ouyang
- ECCV 2022 Fast-MoCo: Boost Momentum-based Contrastive Learning with Combinatorial Patches.**
Yuanzheng Ci, Chen Lin, Lei Bai, Wanli Ouyang
- ICCV 2021 Evolving Search Space for Neural Architecture Search.**
Yuanzheng Ci, Chen Lin, Ming Sun, Boyu Chen, Hongwen Zhang, Wanli Ouyang
- ACM MM 2018 User-Guided Deep Anime Line Art Colorization with Conditional Adversarial Networks.**
Yuanzheng Ci, Xinzhu Ma, Zihui Wang, Haojie Li, Zhongxuan Luo

Research Experience

- Jul.2018 - **SenseTime Group Limited**, Beijing, China.
present *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 under review.
 - **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 pretraining, 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 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 - **DUT Media Lab**, *Dalian University of Technology*, Dalian, China.
Jun.2019 *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)