Guohang Zeng

https://bachml.github.io/
Google Scholar Profile (click here)

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Education

- **The University of Melbourne** — Melbourne, Australia
  M.Phil - Computer Science; Thesis Mark: 91/100 — *Sep 2018 - Feb 2022*
- **Shenzhen University** — Shenzhen, China
  B.Eng - Computer Science; GPA: 3.67/4.16 — *Sep 2012 – July 2016*

Work Experience

- **Huawei Technologies Co., Ltd.** — Dongguan, China
  Machine Learning Engineer — *Dec 2021 - Present*
  - **Automate Operation Process (AIOps)**: Contribute to the Huawei AIOps infrastructure (e.g. anomaly detection for Huawei's telecom equipments.)
- **Sensetime Research** — Shenzhen, China
  Research Intern — *April 2021 - Oct 2021*
  - **Neural Architecture Search (NAS)**: Based on NAS, we implemented and trained an HRNet (a CNN that has parallel branches structure) to achieved better inference efficiency under multiprocessing scenario.
  - **Object Detection**: Trained an object detection CNN model by using the Sensetime AI infrastructure. The model has been adopted in Sensetime products.
- **Taisau Intelligent Technology Co., Ltd** — Shenzhen, China
  Computer Vision Engineer — *Jun 2016 - Aug 2018*
  - **CNN-based face recognition**: implemented CNN models for high accuracy face recognition by using various approaches, including: age-invariant face representation, deep metric learning and domain adaptation. The models had been adopted in several facial recognition products in the company.
  - **Deep Learning Acceleration**: accelerated CNN models mentioned above by using various approaches, including: depth-wise separable convolution, knowledge distillation, low rank approximation and structural network pruning. We achieved 1.6x to 2.0x speedup in the inference phrase.

Research Experience

- **The University of Melbourne** — Melbourne, Australia
  Graduate Student — *Sep 2018 - Sep 2021 (work remotely since 2020)*
  - **Interpretable Machine Learning**: By leveraging a non-trivial connection between adversarial ML and interpretability, we proposed a learning-based framework to generate attributional explanations for deep learning models. Related publication: *Zeng et al. 2021*
  - **Deep Learning for Healthcare**: I conducted research on deep learning for electronic healthcare records.
- **Computer Vision Institute at SZU** — Shenzhen, China
  Research Assistant (part-time) — *Dec 2015 - Aug 2018*
  - **Facial expression recognition**: we achieved STOA results on several benchmarks by using our proposed hand-crafted feature guide network and metric learning. Related publication: *Zeng et al. 2018*
  - **Face recognition with single sample per person**: we achieved STOA results on several benchmarks by using our proposed sparse representation based classifier and convolutional neural network. Related publication: *Yang et al. 2017*

Publications

- **Guohang Zeng**, Yousef Kowsar, Sarah Monazam Erfani, James Bailey, "Generating Deep Network Explanations with Robust Attribution Alignment", in *13th Asian Conference on Machine Learning* ***(ACML 2021)***
- **Guohang Zeng**, Jiancan Zhou, Xi Jia, Weicheng Xie and Linlin Shen, "Hand-crafted Feature Guided Deep Learning for Facial Expression Recognition", in *IEEE International Conference on Face and Gesture Recognition* ***(FG 2018)***
- Meng Yang, Xin Wang, **Guohang Zeng** and Linlin Shen, "Joint and collaborative representation with local adaptive convolution feature for face recognition with single sample per person", in ***Pattern Recognition****, 2017, 66(C):117-128.*

Honors and Awards

- Melbourne Research Scholarship - 2018
- 1st Class Scholarship at SZU (Top 1%) - 2014

Skills Summary

- **Programming**: Python, Java, Matlab, C/C++, Bash
- **Technologies**: PyTorch, Caffe, Keras, Linux, LaTex, git