

# Guohang Zeng

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## RESEARCH INTERESTS

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Computer Vision, Machine/Deep/Statistical Learning, CNN Acceleration, Interpretability of Deep Learning

## EDUCATION

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### Shenzhen University

Bachelor of Engineering in Computer Science(Honor Program); GPA: 3.66/4.15

Shenzhen, China

Sep. 2012 – July. 2016

## EXPERIENCE

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### Institute of Computer Vision, Shenzhen University

Dec 2015 - Present

Research Assistant, Adviser: Prof. Linlin Shen

- **Facial expression recognition:** by using our proposed hand-crafted feature guided network and deep metric learning, we achieved state of the art result on the CK+ dataset.(upon review)
- **Face recognition with single sample per person:** we achieved state of the art results on several datasets by using our proposed sparse representation based classifier and convolutional neural network. Paper has been accepted by *Pattern Recognition* 2017

### Taisau

Jun 2016 - Present

Computer Vision engineer

- **Deep representaion for face recognition:** implemented CNN models for high accuracy face recognition, combined with various state of the art approaches, including: age-invariant face representation, deep metric learning, Inception-Residual CNN architecture, joint-bayesian metric, CNN ensemble and domain adaptation. Our applications has been adopted by Shenzhen Government. ( report)
- **Convolutional neural network acceleration:** accelerating CNN models by using various approaches, including: depthwise separable convolution, low rank approximation and structural network pruning. We achieved 1.6x to 2.0x speedup ratio depends on network architecture.
- **Lane markings detection:** implemented algorithms for detecting lane markings based on hand-crafted feature. It's used to recognize traffic violations. Our algorithms has been adopted by the Shenzhen Transport Department.

### National High Performance Computing Center at Shenzhen

Dec 2013 - Nov 2014

Research Student, Adviser: Prof. Rui Mao

- **Metric space indexing algorithm:** optimized data query performance in a metric space databases system by designed and implemented a novel indexing algorithm.

## PUBLICATIONS AND TECH REPORTS

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1. **Guohang Zeng**, Jiancan Zhou, Xi Jia, Weicheng Xie and Linlin Shen, “Hand-crafted Feature Guided Deep Learning for Facial Expression Recognition”, in submitted to *International Conference on Face and Gesture Recognition(FG 2018)*
2. 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

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University Scholarship, Top Class Honor (Top 1%)

2013-2014

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2012-2013

## SKILLS

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### Programming Technologies

Python, C/C++ , Java , Matlab  
Caffe, PyTorch, OpenCV, OpenMP, Linux