

GU, XIUYE

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EDUCATION BACKGROUND

Zhejiang University (ZJU), Zhejiang, PRC

Bachelor of Engineering in Computer Science expected in June 2017 Sept. 2013 – Present

- GPA: 93/100 (3.97/4.0), the third year GPA: 94/100 (4.0/4.0); **Rank 1/189**.

University of California, Davis (UCD), CA, USA

Global Research Experience in Advanced Technologies Program July 2016 – Sept. 2016

- GPA: A (five letter grades).

PUBLICATIONS

- **Xiuye Gu***, Chaoqi Wang*, Cong Fu, Deng Cai. *A Revisit on Binary Code Learning for Large-scale Content Based Image Retrieval*. The 30th IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2017 (* indicates co-first authorship). Under review.
- Maheen Rashid, **Xiuye Gu**, Yong Jae Lee. *Interspecies Knowledge Transfer for Facial Key-point Detection*. The 30th IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2017. Under review.

RESEARCH EXPERIENCE

Research Intern – University of California, Davis

Advisor: Prof. Yong Jae Lee

Interspecies Knowledge Transfer for Facial Keypoint Detection July 2016 – Nov. 2016

- Proposed a novel deep learning method for localizing animal facial landmarks via K nearest neighbor (kNN) search, thin plate spline warping network and fine-tuning; achieved significant improvement especially when training data are scarce.
- Developed the holistic system in Torch and Python; obtained reasonable baseline results.
- Built a dataset with 3900 horse facial images and keypoint annotations; developed an annotation tool.

Undergraduate Member – State Key Lab of CAD & CG, Zhejiang University

Advisor: Prof. Deng Cai

A Revisit on Binary Code Learning for

Large-scale Content Based Image Retrieval (CBIR)

May 2016 – Present

- Identified and empirically proved common insufficiencies in the experimental settings of state-of-the-art deep hashing methods.
- Proposed a revised experimental setting for better evaluating hashing methods for CBIR tasks and made the setting public as a new benchmark dataset.
- Conducted experiments under the revised setting to compare these deep hashing methods with traditional hashing and approximate nearest neighbor search algorithms.
- Verified and analyzed the inferiority of these deep hashing methods.

EFANNA : An Extremely Fast Approximate Nearest Neighbor

Search Algorithm Based on kNN Graph

Feb. 2016 – June 2016

- Contributed to the EFANNA open source C++ library and conducted comparison experiments.

- Adopted the *Lanczos* algorithm, the Boost and CLAPACK library to implement the *Anchor Graph Hashing* and *Fast kNN Graph Construction with Locality Sensitive Hashing* algorithms; achieved high computational efficiency.
- Implemented multi-threading via OpenMP API for the EFANNA library.
- Developed the binary code search algorithm for the EFANNA library.

License Plate Recognition System

Sept. 2015 – Feb. 2016

- Proposed a robust iterative license plate segmentation algorithm.
- Designed and implemented a license plate segmentation system through combining my algorithm with traditional vision algorithms; achieved the error rate of 4% on low resolution images.
- Built a license detection system with robust skew and slant correction for better segmentation results.
- Wrote three literature reviews on license plate detection, segmentation and character recognition.

SELECTED HONORS & AWARDS

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| · National Scholarship in China (1.5%) | 2015, 2016 |
| · First-Class Scholarship for Outstanding Students (3%) | 2015, 2016 |
| · First-Class Scholarship for Outstanding Merits (3%) | 2015, 2016 |
| · HE Zhijun Scholarship (Highest scholarship in the College of Computer Science & Technology, ZJU) | 2016 |
| · Excellent Student Awards, Zhejiang University | 2014 |