

YUWEN XIONG

10 King's College Rd, Sandford Fleming Building 3203 ◊ Toronto, Canada, M5S 3G4
(+1) 647-915-3125 ◊ yuwen.xiong.cs@gmail.com

EDUCATION

Zhejiang University, Hangzhou, P.R.China Sept. 2013 - June 2018
B.Eng. in Computer Science and Technology,
Pursuit Science Class, Chu Kochen Honors College
Overall GPA: 3.75/4.0, Major GPA 3.97/4.0, Rank top 5%
Received waiver for the National College Entrance Exam to enter Zhejiang University from 1st Prize in National Olympiad in Informatics in Provinces (top 1.8% over 60,000 participants).
National University of Singapore, Visiting Student with Full Scholarship July 2015 - Aug. 2015

PUBLICATIONS

Jifeng Dai*, Haozhi Qi*, **Yuwen Xiong***, Yi Li*, Guodong Zhang*, Han Hu, Yichen Wei. *Deformable Convolutional Networks*. IEEE International Conference on Computer Vision (**ICCV**), 2017 (**Oral**). ([pdf](#)) (* equal contribution)

Xizhou Zhu, **Yuwen Xiong**, Jifeng Dai, Lu Yuan, Yichen Wei. *Deep Feature Flow for Video Recognition*. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2017. ([pdf](#))

Haochao Ying, Liang Chen, **Yuwen Xiong**, Jian Wu. PGRank: Personalized Geographical Ranking for Point-of-Interest Recommendation. International World Wide Web Conference (**WWW**), 2016. ([pdf](#))

Haochao Ying, Liang Chen, **Yuwen Xiong**, Jian Wu. Collaborative Deep Ranking: a Hybrid Pair-wise Algorithm with Implicit Feedback. Pacific Asia Knowledge Discovery and Data Mining (**PAKDD**), 2016. ([pdf](#))

RESEARCH EXPERIENCE

University of Toronto July 2017 - Present
Research Assistant, Advisor: Prof. Raquel Urtasun *Toronto, Canada*

Microsoft Research Asia July 2016 - June 2017
Research Assistant, Advisor: Lead Researcher, Dr. Jifeng Dai *Beijing, China*

- Deformable Convolutional Networks
 - Worked on enhancing the transformation modeling capability for convolution layer and its relevant part.
 - Write code to exploit data-driven receptive field learning, by augmenting the spatial sampling locations for convolution.
 - Conducted experiments on Pascal VOC, Cityscapes and COCO dataset for variant task. Our approach made huge performance gain on all the tasks.
 - This work accepted at ICCV 2017 as oral
 - Maintaining an [official repository](#) on GitHub (over 1000 stars by now).

- Deep Feature Flow for Video Recognition
 - Worked on optical flow and object detection from video with deep convolutional neural network;
 - Proposed an end-to-end flow-guided feature warping framework to apply flow field to video recognition that inference speed could be at most one order of magnitude faster than previous approaches with little accuracy drop
 - Conducted experiments on ImageNet VID dataset;
 - This work accepted at CVPR 2017

Zhejiang University Advanced Computing and System Lab

Sept. 2015 - July 2016

Research Assistant, Advisor: Prof. Jian Wu

Hangzhou, China

- Explored how to apply deep learning on recommendation system;
- Proposed a recommendation algorithm with Stacked Denoising Autoencoder, using Stacked Denoising Autoencoders output as item feature in user-item matrix factorization;
- Combined it with a ranking-based method to make recommendations on very sparse matrices;
- Wrote experiments code and did all experiments with a Ph.D. candidate;
- One paper accepted at PAKDD 2016 and one poster accepted by WWW 2016.

PROJECTS

py-R-FCN

Sept. 2016

- A Python version of R-FCN supporting joint training;
- A reimplement of the [NIPS 2016](#) paper based on py-faster-rcnn;
- Supports both joint training (1.5x faster than 4 step method) and a new 5-step training method;
- Source code on GitHub: <https://github.com/YuwenXiong/py-R-FCN> (over 550 stars by now).
- Kaggle The Nature Conservancy Fisheries Monitoring Competition, 1st Place Winner's choice: [Winner's interview](#).

Image Retrieval Engine

Dec. 2015 - Jan. 2016

- An image retrieval engine based on Deep Convolutional Neural Network and AutoEncoder;
- Used VGG16 fc7 feature to compute similarity and retrieve similar images, trained an AutoEncoder to reduce the feature dimensions from 4096 to 64 to increase speed;
- Works well even when images are cropped in half in some situations.

HONORS & AWARDS

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| 1 st Prize of Excellent Undergraduate Scholarship (Top 3% in Department) | 2016 |
| Top Student of Basic Science Scholarship (25/215) | 2014, 2015, 2016 |
| Best Demo (6/20000, On-site), Microsoft Beauty of Programming | 2016 |
| 2 nd Prize of Excellent Undergraduate Scholarship (Top 6% in Department) | 2015 |
| Top 1000 over 25000 worldwide participants, Google Code Jam | 2014, 2015 |

SKILLS

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| Programming Languages | Python, C, C++, CUDA, Matlab, Java, Swift |
| Frameworks & Tools | PyTorch, Caffe, MXNet, L ^A T _E X, Vim, Git |
| Language | Chinese (Native), English (Professional working proficiency) |