

HUAZHE XU

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EDUCATION

Tsinghua University

BA in Electronics Engineering

Beijing, China

Aug 2012 – June 2016

- GPA: 93/100 (ranked in top 2%)
- Awarded First Prize in Physics Competition (top 10 out of ~10,000 participants), Comprehensive Scholarship (top 1% out of 239, awarded to those with outstanding academic performance and extra curriculum), Academic Scholarship (top 1% out of 239, awarded to those with outstanding performance)
- Admitted on basis of top-ranked performance in Jilin Province on Tsinghua early decision admissions exam
- Visiting student at UC Berkeley (Berkeley Vision and Learning Center) in 2015 summer
- Exchange student at University of Toronto in 2014 fall

University of Toronto

Exchange Student

Toronto, Canada

Sept 2014 – Dec 2014

- research in Machine Learning group
- Straight A+ in all the courses
- Full score in computer vision class

PUBLICATIONS

1. Tian Xie; Qian Han; Huazhe Xu; Zihao Qi; Wenqian Shen, "A Low-Complexity Linear Precoding Scheme Based on SOR Method for Massive MIMO Systems," in Vehicular Technology Conference (VTC Spring), 2015 IEEE 81st, vol., no., pp.1-5, 11-14 May 2015

RESEARCH EXPERIENCE

University of California, Berkeley (Department of Computer Science)

Berkeley, USA

Research Assistant to Professor Trevor Darrell, Managing Director of Berkeley Vision and Learning Center, and Professor Jiashi Feng, National University of Singapore

July 2015 – Present

Fully Convolutional Neural Network: Deep Scene Parsing

- Generalized a mutually boosting fully convolutional net model, to improve the performance of semantic scene parsing
- Converted the conventional difficult-to-solve training problem into biconvex optimization problem in order to generate dense pixel-wise labels of images with both category and attribute names
- Surpassed the state-of-the-art result in scene parsing using three datasets, one of which was generated for the task
- Ready to submit to Conference on Computer Vision and Pattern Recognition (CVPR) 2016 (in November)

University of California, Berkeley (Department of Computer Science)

Berkeley, USA

Research Assistant to Professor Trevor Darrell, Managing Director of Berkeley Vision and Learning Center, and Professor Jiashi Feng, National University of Singapore

July 2015 – Present

RNN- and LSTM-based Object Retrieval upon Natural Language Query

- Designed a LSTM-based neural network to locate described object in image
- Implemented, using adjusted Caffe architecture, a LSTM which could feedback at each time step
- Trained neural network with massive data
- Solved the problem that real world queries would include words that have not been pre-learned by neural net

University of Toronto (Department of Computer Science)

Toronto, Canada

Research Assistant to Professor Sanja Fidler, Tutorial Chair at CVPR'16, and Professor Raquel Urtasun, Program Chair CVPR'18

Sept 2014 – March 2015

Context Image Understanding and Human Taste Analysis with Natural Language Information

- Designed a ranking system to recommend cars according to personal visual preference
- Created a framework for natural language parsing with three objectives: to attain the sentiment of texts, interpret the effect of specific parts of speech, and resolve co-reference resolution.
- Crawled for data online to make test dataset, applied neural net to extract features
- Developed appropriate algorithm to build a recommendation system instead of traditional collaborative filtering and direct probabilistic factorization

Tsinghua University (Department of Electronic Engineering)

Beijing, China

Research Assistant to Professor Shengjin Wang, Head of Intellectual Image and Text Lab Dec 2014 – May 2015

Pedestrian Re-Identification with Deep Decomposition

- Developed method to evaluate re-identification accuracy inspired by Image Search Method
- Modeled video background with reformed Gaussian Mixture Modeling Method to enhance foreground extraction
- Segmented pedestrians into parts on VIPeR dataset and Market-1501 dataset for use as data inputs

Tsinghua University (Department of Electronic Engineering)

Research Assistant to Professor Linglong Dai

Beijing, China

Jan 2014 – Oct 2014

Undergraduate research on 5G wireless communication-OFDM pilot contamination

- Created models on low complexity precoding scheme for Massive MIMO System
- Paper accepted by IEEE VTC 2015

WORK EXPERIENCE

Microsoft Research Asia

Developer, Kinect Team

Beijing, China

July 2014 – Sept 2014

- Develop an athletic simulating software upon Kinect
- Final product was awarded as second prize in peers

Stocki Internet Finance Program

Chief Engineer,

Beijing, China

Mmm 20xx – Present

- This is a startup company we are running with partners under the direct of our mentor, Chief Investment Officer in Yingfeng Capital
- Developed demo of Stocki in both PC end and Mac end
- Incubation at Qidi Investment Incubator

SELECTED AWARDS AND HONORS

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|---|---|------|---|
| • | nnual Comprehensive Award (~1% in 280) | 2013 | A |
| • | nnual Academic Award (~1% in 280) | 2014 | A |
| • | irst Prize in National "Duishi" Programming Contest hosted by Tsinghua (2/ 300) | 2012 | F |
| • | irst Prize in Chinese Undergraduate Students' Physics Competition (top 1%) | 2013 | F |
| • | irst Prize of National Olympiad in Physics Competition, Jilin Province (6/3729) | 2009 | F |

ADDITIONAL INFORMATION

- Select extracurricular activities: Vice President of Piano Club (Sept 2013 – Sept 2014), Tsinghua Piano Club
- Interests: Enjoy playing the piano (started from four), tennis (2 years)
- Programming Skills: Proficient in Matlab, C, Python, C++, PHP, HTML
- Languages: Mandarin Chinese (native), English (conversational)