Xihan LI

Room 2320, Science Building II, Peking University, Beijing, 100871
xihanli@pku.edu.cn • +86 188 6818 0208 • https://snowkylin.github.io

EDUCATION

Peking University, Beijing, China

M.S. Candidate in Computer Science and Technology (Machine Intelligence)   Sep 2016 – current
Advisor: Prof. Yunhai Tong
Focus: Data Mining, Maching Learning, Deep Learning

National Chiao Tung University, Hsinchu, Taiwan

Exchange Student, College of Electrical and Computer Engineering   Feb 2015 - Jun 2015

Zhejiang University, Hangzhou, Zhejiang, China

B.Eng. in Computer Science and Technology   Sep 2012 – Jun 2016
Minor Courses Certificate in Biological Science.
Graduated with Chu Kochen College Honors.
Cumulative GPA: 3.82 / 4.0; Major GPA: 3.88 / 4.0

RESEARCH EXPERIENCE

Key Laboratory on Machine Perception (Ministry of Education), Peking University

Graduate Research Assistant (Advisor: Prof. Yunhai Tong)   Sep 2016 – current
- Developed an easy-to-extend diversity-promoting learning framework named MEMD (Multi-Encoder to Multi-Decoder) for conversational response generation, in which an auxiliary encoder and an auxiliary decoder are introduced to provide necessary training guidance without resorting to extra data or complicating network's inner structure.
- Paper accepted by *COLING 2018*.

Maching Learning Group, Microsoft Research Asia

Research Intern (Advisor: Dr. Jiang Bian)   Jan 2018 - Oct 2018
Project: Resource Balancing in Complex Logistics Network with Multi-Agent Reinforcement Learning
- Proposed a novel sophisticated multi-agents reinforcement learning approach to tackle the imbalance between the resource's supply and demand in logistic networks, which is one of the most important problems in real logistics domain. In particular, inspired by the externalities especially the interactions between resource agents, we introduce an innovative cooperative mechanism for state and reward design that resulting more effective and efficient transportation.
- Paper submitted to *AAAI 2019*

Psychological Health and Counseling Center, Peking University

Research Assistant (Advisor: Prof. Kaiwen Xu)   Mar 2018 - current
- Proposed a three-level suicidal text recognition model with bayesian method and RNN, which is able to work with limited samples and model uncertainty of inference. This work will be applied in Peking University and other cooperated universities for timely detection and crisis intervention for students with high risk of suicide.
- Paper in progress for *NAACL 2019*.

Department of Computer Science, University of California, Los Angeles

Research Assistant (Advisor: Prof. Yizhou Sun)   Aug 2017 - Sep 2017
- Developed an incremental method for super large scale network embedding as well as methods to speed up training and maintain the quality of the embedding, which is viable to embed massive networks with billions of edges on a consumer-grade PC.

Institute of Microbiology, Chinese Academy of Sciences

Research Assistant (Advisor: Prof. Yijian Yao)   Jul 2016
Project: Chinese Species Red List - Fungus Volume
- Implemented a kit of programs as an automatic pipeline that handle multiple gene sequences with BLAST, and predict taxonomy information by designated criteria, which significantly boosted the efficiency of genome-based species identification compared with previous manual analysis.
- Developed a multi-user online revising system for conservation status assessment of fungus in China.

Institute of Artificial Intelligence, College of Computer Science, Zhejiang University

Undergraduate Research Assisttant (Advisor: Prof. Xiaogang Jin)　　　May 2014 – Jun 2016
Project: Intelligent Recommendation Algorithm for Wikipedia
- Awarded Outstanding Undergraduate Thesis of Zhejiang University.

Complex Laboratory of Innovation, College of Life Science, Zhejiang University

Undergraduate Research Assisttant (Advisor: Prof. Ming Chen)　　　Mar 2013 – Nov 2013
Project: Detection of Thrombin with an Aptamer-based Macromolecule Biosensor
- Awarded Gold Medal & Best Experimental Measurement Approach (Asia) of iGEM 2013.

PUBLICATIONS
- Zou, Meng, **Xihan Li**, Haokun Liu, and Zhihong Deng. "MEMD: A Diversity-Promoting Learning Framework for Short-Text Conversation." In *Proceedings of the 27th International Conference on Computational Linguistics (COLING 2018)*, 1281–1291. Santa Fe, New Mexico, USA: Association for Computational Linguistics, 2018.
- Wang, Jiasheng, et al. "Detection of thrombin with an aptamer-based macromolecule biosensor using bacterial ghost system." *ACS synthetic biology* 3.12 (2014): 963-965.

SELECTED AWARDS
- Outstanding Undergraduate Thesis of Zhejiang University　　　Jun 2016
- **Outstanding Winner**, 2015 Interdisciplinary Contest in Modeling (ICM 2015)　　　Apr 2015
- **First Prize of Undergraduate Group**, 2014 Contemporary Undergraduate Mathematical Contest in Modeling　　　Dec 2014
- Excellent Student Award, Zhejiang University　　　Dec 2014
- Outstanding Student Leader Award, Zhejiang University　　　Dec 2014
- **First Prize**, 2014 Mathematical Contest in Modeling, Zhejiang University　　　Jun 2014
- **Gold Medal & Best Experimental Measurement Approach (Asia)**, 2013 International Genetically Engineered Machine competition (iGEM 2013)　　　Oct 2013
- **First Prize**, 2011 National Olympiad in Informatics in Provinces　　　Dec 2011

TEACHING EXPERIENCES

Data Warehousing and Data Mining Technology, Peking University

Teaching Assistant (Lecturer: Prof. Yunhai Tong)　　　Spring and Summer Semester, 2017
- Designed detailed instruction and criteria of final course project. Directed the project class. Maintained server for course resources.
- Course project instruction page available on GitHub: https://github.com/snowkylin/data-mining-pku

TECHNICAL CERTIFICATE

Google Developer Expert (GDE) in Machine Learning　　　Nov 2017 – current
- One of the nine GDEs in Mainland China, which means experienced, recognized developers of Google technologies as well as outstanding professionals.
- Author of *A Concise Handbook of TensorFlow* (https://tf.wiki), a technical handbook supported by Google Developer Relations Team and TensorFlow Engineer Team, whose extended version will be published by *Posts & Telecom Press* in early 2019. Cooperated with Google to spread TensorFlow in China (lectures, tutorials, open-source code contributions).
- GDE Community Interviewer (July 2018 - current).
- Profile page: https://developers.google.com/experts/people/xihan-li

TECHNICAL CONFERENCES

Google Developer Group DevFest 2018, Shanghai　　　Nov 2018
Main instructor for TensorFlow codelab.
Google Developers Experts Summit 2018, Mountain View, USA　　　Nov 2018
Invited attendee with full travel support from Google.
TensorFlow Day 2018 Beijing Codelab, Beijing　　　Sep 2018
Main instructor.
TensorFlow Dev Summit 2018, Mountain View, USA　　　Mar 2018
Invited attendee with full travel support from Google.
Google Developer Group DevFest 2017, Beijing　　　Nov 2017
Speaker. Topic: Network Embedding with TensorFlow
Machine Learning Camp Jeju 2017, Jeju, Korea　　　Jul 2017
Participant. One of the 20 developers selected from over 600 applications worldwide of the one-month fully-funded AI workshop sponsored by Google & Kakao.
Google I/O 2017 Extended, Beijing　　　May 2017

Speaker. Topic: One-shot Learning with Neural Turing Machines

SELECTED OPEN-SOURCE PROJECTS (STAR > 50)	
snowkylin / TensorFlow-cn	Jan 2018 – Aug 2018

An online handbook of TensorFlow based on Eager Execution mode.

snowkylin / line   Aug 2017

TensorFlow implementation of LINE, an efficient network embedding algorithm.

snowkylin / ntm   Jun 2017 – Jul 2017

TensorFlow implementation of Neural Turing Machines (NTM), with its application on one-shot learning (MANN)

snowkylin / rnn-handwriting-generation   Dec 2016 – Jan 2017

Generating handwriting with LSTM, Mixture Gaussian & Bernoulli distribution and TensorFlow.

* See https://github.com/snowkylin for a full list with details.

COMMERCIAL SOFTWARES

Course Management System of Student Association of Zhejiang University   Nov 2014 – Jan 2015

- Designed for students to choose courses offered by clubs and student associations in ZJU.
- Licenced to Student Association Union of ZJU with extended development on http://www.zjustjpkc.com/ with more than 3,000 students.

Wilddream Art Gallery Platform   May 2014 – current

- An easy-to-use, full-featured, mobile friendly online multiuser art gallery system with multilanguage support.
- Licenced to WildDream Art on http://www.wilddream.net with more than 2,000 users.
- With Computer Software Copyright Registration Certificate (Registration No: 2017SR111204) issued by National Copyright Administration of the PRC.

COMPUTER SKILLS

- Programming Languages: Python, MATLAB, LaTeX, C++, Pascal, Java, PHP, Bash, C, Verilog, JavaScript, CSS, HTML, SQL, XML
- Frameworks: TensorFlow, NumPy, scikit-learn, Android SDK, OpenCV, OpenGL, LLVM, Arduino, ThinkPHP, Bootstrap

CAMPUS AND SOCIAL ACTIVITIES

Psychological Health and Counseling Center, Peking University

Trainee Psychological Consultant   Feb 2018 – current

- Volunteered front door service. Assisted senior consultants. Attended supervision and professional skills training. (with Third Level / Senior Skill Level Occupational Qualification Certificate of Psychological Consultant issued by MOHRSS of the PRC)

Animal Protector Association, Zhejiang University (ZJUAPA)

9th, 10th, 11th President   Sep 2013 – Mar 2016

- Established the regulation of association, leaded numerous animal rescues and activities, revived the association from 5 remaining people to one of the most influential associations in ZJU with 5 departments, more than 40 staffs and more than 150 members, which was awarded Outstanding Student Association of ZJU in 2014.
- Initiated the course "Introduction to Animal Protection: Theory and Practice" in 2014 and 2015 as main instructor, which was awarded First Prize by Student Association Union of ZJU. Invited guest lectures in Zhejiang Museum of Natural History and University of Science and Technology of China.
- Awarded Outstanding Student Leader of ZJU in 2014, selected as "the guardian of animals who left a new association and the spirit of truth-seeking and pragmatic to ZJU" by ZJU News in Graduation 2016 Column.

Wildlife Conservation Society (WCS)

Intern Student   Jul 2015 – Sep 2015

- Supported on webpage development. Writing surveys and newsletters about wildlife trade.

Mainland China Student Union, National Chiao Tung University

Director of Planning   Feb 2015 – Jun 2015

- Planned and directed activities for students from Mainland China, including a grand evening party for over 200 students from 20 different universities.

Zhejiang Small Animal Protection Association, Zhejiang Province, China (ZJSAPA)

Web Maintenance Engineer   Mar 2013 – current

- Full responsibility for all hardware & software development and maintenance of the association's website (http://www.zjsapa.org). Volunteer work.

[*CV compiled on 2018-10-25 for general use*]