

XIUZE ZHOU

zhouxiuze@foxmail.com | 086-13606933235

No.16, Yingpan Road, Longwan Dist., Wenzhou, Zhejiang, China, 325024

EDUCATION

Xiamen University 09/2013-06/2016

School of Aerospace Engineering

M.Eng. in *Pattern Recognition and Intelligent Systems* GPA: 3.43/4.0

Awards: Principal Level Scholarship (10/2013)

Courses: Machine Learning, Design of Neural Networks, Digital Image Processing, Time Series Analysis, Pattern Recognition, Data Mining and Its Application, Artificial Intelligent: Theory and Application, Recommender System.

Zhejiang University of Science and Technology 09/2008-06/2012

School of Automation and Electrical Engineering

B.Eng. in *Automation* GPA: 3.23/4.0

Awards: National Encouragement Scholarship (12/2011&12/2010); First-Class Scholarship (10/2011)

Courses: C Programming, Embedded Systems, Computer Network and Communication, Computer Control System.

PROFESSIONAL EXPERIENCE

Research Scientist, **AI Research Institute of Hithink RoyalFlush Information Network Co., Ltd.** 06/2019-Present

- Research the newest machine learning algorithms and recommender system technology on stocks and hot news
- Apply neural network models to drug-target interaction prediction and evaluate the performance
- Publish papers and apply for relevant patents for the corporation
- Give lessons on Artificial Intelligence and Recommender Systems to the staff

Research Assistant, **Big Data Lab of Xiamen University** 06/2016-02/2019

- Instructed two undergraduate and three graduate students in scientific research
- Tracked, studied, reproduced, and improved up-to-date machine learning methods
- Published papers on machine learning and recommender systems

Software Engineer, **Dragon SOFT** 09/2013-06/2014

- Developed an electronic target practice system for security guards' shooting training
- Recorded the track of users' shooting behavior from sensors in a database
- Built a model analyzing users' shooting behavior concerning speed, acceleration and number of cylinders

Assistant Engineer, **Gold Electronic** 03/2012-07/2012

- Cooperated with motor companies, such as Zotye and BYD, on battery management system development
- Developed a testing and analytics platform for performance of a lithium battery with C# (real-time data)
- Used CAN bus to collect working data of batteries and analyzed the data for balance power

RESEARCH PROJECTS

Campus Recommender System 03/2021- Present

- Built user profiles based on the data crawled from websites
- Recommend information from within and outside the university based on faculty research, courses taught, and interests
- Recommend information, such as courses from MOOC, and publications from Arxiv, to students

Online Education Explainable Recommender System, NSFC 06/2018-12/2018

- Summarized over 500,000 exercises and classified their knowledge points from all subjects
- Applied matrix factorization for online learning and recommendation of exercises based on interaction of users
- Added latent features learned by neural networks from exercises to online matrix factorization for better performance

Development of Memorizing Words APP 06/2017-02/2018

- Extracted the records of memorizing words of over 100,000 users from a database
- Counted the pairs of error words with the co-occurrence rate to obtain a co-occurrence table
- Provided words, along with situation pictures, to enhance memory and showed co-occurrence words from a table

Analysis of Film Review from Douban.com 09/2016-03/2017

- Crawled film reviews and ratings from websites
- Segmented words and cleaned and processed texts
- Added features learned by neural networks to matrix factorization to predict movie's ratings

Topics Analysis on Weibo 05/2015-02/2016

- Crawled Weibo messages from websites
- Segmented words, cleaned and processed texts, converted the data for storage and analytics
- Built a topic model LDA by C++ and applied it to obtain topics of Weibo for discovering hot events

Email-Based User Relationship Analysis 10/2014-02/2015

- Cleaned and processed the contents of over 100,000 emails to obtain message bodies
- Built an author-topic model with biterm pattern by C++
- Used model to identify relationships between users based on communication contents

RESEARCH

Current Work

- Knee Osteoarthritis Prediction
- Reinforcement Learning for Recommendation
- Federal Learning for Recommendation
- Remaining Useful Life Prediction of Lithium-Ion Batteries

Under Review

- [1] M. Chen, and **X. Zhou***, "CoCNN: Co-occurrence CNN for Recommendation".
- [2] D. Chen, S. Lu, and **X. Zhou***, "A Deep Learning Model for Remaining Useful Life Prediction of Lithium-Ion Batteries".
- [3] M. Chen, and **X. Zhou***, "Autoencoders for Drug-Target Interaction Prediction".
- [4] X. Wu, W. Zeng, F. Lin*, and **X. Zhou**, "NeuRank: Learning to Ranking with Neural Networks for Drug-Target Interaction Prediction".

Papers

- [5] M. Chen, Yunhao Li, and **X. Zhou***, "CoNet: Co-occurrence Neural Networks for Recommendation", *Future Generation Computer Systems*. (IF = 6.125). (Accepted)
- [6] M. Chen, and **X. Zhou***, "DeepRank: Learning to Rank with Neural Networks for Recommendation", *Knowledge-Based Systems*, Dec. 2020, 209, pp. 106478. (IF = 5.921)
- [7] K. Li, **X. Zhou**, F. Lin*, W. Zeng, and G. Alterovitz, "Deep Probabilistic Matrix Factorization Framework for Online Collaborative Filtering", *IEEE Access*, Mar. 2019, 7, pp. 56117-56128. (IF = 3.745)
- [8] K. Li, **X. Zhou**, F. Lin*, W. Zeng, B. Wang, and G. Alterovitz, "Sparse Online Collaborative Filtering with Dynamic Regularization", *Information Sciences*, Dec. 2019, 505, pp. 535-548. (IF = 5.910)
- [9] **X. Zhou**, W. Shu, F. Lin*, and B. Wang, "Confidence-Weighted Bias Model for Online Collaborative Filtering", *Applied Soft Computing*, Sep. 2018, 70, pp. 1042-1053. (IF = 5.472)
- [10] **X. Zhou*** and S. Wu, "Rating LDA Model for Collaborative Filtering", *Knowledge-Based Systems*, Oct. 2016, 110, pp. 135-143. (IF = 5.921)
- [11] F. Lin, **X. Zhou**, and W. Zeng*, "Sparse Online Learning for Collaborative Filtering", *International Journal of Computers Communications & Control*, Apr. 2016, 11 (2), pp. 248-258. (IF = 2.093)
- [12] S. Lu, H. Chen, **X. Zhou**, B. Wang, H. Wang*, and Q. Hong, "Graph-Based Collaborative Filtering with MLP", *Mathematical Problems in Engineering*, Dec. 2018, 2018, pp. 1-10. (IF = 1.009)
- [13] **X. Zhou**, F. Lin*, L. Yang, J. Nie, Q. Tan, W. Zeng, and N. Zhang, "Load Balancing Prediction Method of Cloud Storage based on Analytic Hierarchy Process and Hybrid Hierarchical Genetic Algorithm", *SpringerPlus*, Nov. 2016, 5 (1), pp. 1989-2012. (IF = 1.780)
- [14] **X. Zhou*** and S. Wu, "The Biterm Author Topic in the Sentences Model for E-Mail Analysis", *IEICE Transactions on Information and Systems*, Aug. 2017, E100.D (8), pp. 1852-1859. (IF = 0.770)

Note: * indicates the corresponding author

ACADEMIC SERVICE

Reviewer

IEEE Access, IEEE Transactions on Industrial Informatics

COMPETITIONS AND AWARDS

The 2 nd Prize in the National Advanced Mathematics Contest for Undergraduates (Zhejiang)	12/2011
The 2 nd Prize in the Zhejiang Advanced Mathematics Contest for Undergraduates	04/2011
The 3 rd Prize in the Zhejiang Advanced Mathematics Contest for Undergraduates	10/2009 & 04/2010
The 3 rd Prize in the Zhejiang Physics Contest for Undergraduates	12/2009 & 12/2010
The 1 st Prize in the Electronics Design Contests, ZUST	12/2010

ACTIVITIES

Teaching Assistant, Xiamen University	09/2013-01/2014
• Guided freshmen in the subjects of Advanced Mathematics and Programming C and taught some learning skills	
Assistant Mentor, Zhejiang University of Science and Technology	09/2010-06/2011
• Led freshmen to adapt quickly to their new environment and helped them solve their study problems	
Journalist, Press Corps of Zhejiang University of Science and Technology	12/2008-06/2011
• Conducted face-to-face interviews, wrote news articles, which received positive audience responses	
Founder and Editor in Chief, Say Ourselves, E-magazine	12/2009-08/2011
• Created a monthly e-magazine about college life	

COMPUTER SKILLS

Programming: C/C++, C#, Python, Java, Matlab,
Toolkits: TensorFlow, Pytorch, Sklearn, etc.
Database: MySQL, SQL Server