

Yujing(Emma) Chen

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EDUCATION

George Mason University

Ph.D. in Computer Science

Research Interests: Machine Learning, Federated Learning, Deep Learning, Reinforcement Learning

Fairfax, VA, US

Aug. 2016 – present

Renmin University of China

M.A. in Art and Design, School of Arts

Beijing, China

Sep. 2013 – July 2016

Beijing University of Posts and Telecommunications

B.E. in Digital Media Art, School of Information and Communication Engineering

Beijing, China

Sep. 2006 – July 2010

EXPERIENCE

Graduate Research Assistant

Data Mining Lab, Computer Science, George Mason University

May 2017 – Present

- On-Device Federated Learning: robust, efficient and privacy-aware on-device machine learning study motivated by real-world problems associated with user experience of IoT device sensor data. Developing high performance federated learning methods with deep learning from large scale time-series data and image data (Three papers published, one in submission).
- Education Data Mining: early drop-out study of college students with survival analysis methods from large and diverse type of educational data (One paper published).

Graduate Teaching Assistant

Computer Science, George Mason University

Aug. 2016 – May 2019

- Courses: Data Structures(Java), Intro Computer Programming, Data Mining(Python), Computer Vision(Python)

Lead Designer

Online Sales Group, Intel China

Feb. 2014 – Mar. 2016

Beijing, China

- Participated in data analysis for online sales of Intel products and design the interactive data visualization board.
- Collaborated with the sales and marketing teams to design the user interface of Intel Edison and related promotion activities.

Front-end Engineer

China Software Testing Center

June 2011 – Mar. 2013

Beijing, China

- Implemented the designs for one main website and 64 sub-sites of Ejin Horo.
- Developed websites for the annual General Assembly of the department.
- Provided front-end development support and designs for websites of many other local governments.

Front-end Engineer

Wu Yu Tai Tea Company

July 2010 – June 2011

Beijing, China

- Built and maintained the e-commerce website for the company's online sales.

PUBLICATIONS

- Zheng Chai, Yujing Chen, Liang Zhao, Yue Cheng and Huzefa Rangwala. *FedAT: A Communication-Efficient Federated Learning Method with Asynchronous Tiers under Non-IID Data*. Under Review.
- Hui Zheng, Pattiya Mahapasuthanon, Yujing Chen, Huzefa Rangwala, Anya S Evmenova and Vivian Genaro Motti. *WLA4NDD: a Wearable Dataset of Learning Activities for Young Adults with Neurodevelopmental Disorders to Provide Support in Education*. Under Review of SIGCHI.
- Yujing Chen, Yue Ning, Martin Slawski and Huzefa Rangwala. *Asynchronous Online Federated Learning for Edge Devices with Non-IID Data*. 2020 IEEE International Conference on Big Data (Big Data). IEEE, 2020. (Acceptance Rate: 15.5%)
- Yujing Chen, Yue Ning, Zheng Chai, and Huzefa Rangwala. *Federated Multi-task Learning with Hierarchical Attention for Sensor Data Analytics*. In 2020 International Joint Conference on Neural Networks (IJCNN). IEEE, 2020.

- Yujing Chen, and Huzefa Rangwala. *Attention-based Multi-task Learning for Sensor Analytics*. 2019 IEEE International Conference on Big Data (Big Data). IEEE, 2019.
- Yujing Chen, Aditya Johri, and Huzefa Rangwala. *Running out of stem: a comparative study across stem majors of college students at-risk of dropping out early*. In Proceedings of the 8th International Conference on Learning Analytics and Knowledge, pp. 270-279. ACM, 2018.

REVIEWER

International Joint Conferences on Artificial Intelligence (IJCAI'20)
 AAAI Conference on Artificial Intelligence (AAAI'21'20)
 IEEE International Conference on Big Data (BigData'20'19)
 IEEE International Conference on Data Mining (ICDM'20'19)
 European Conference on Machine Learning (ECML'19'18)
 Journal of ACM Computing Surveys (2020)
 SIGKDD Conference on Knowledge Discovery and Data Mining (KDD'20)
 Conference on Information and Knowledge Management (CIKM'18)
 Educational Data Mining (EDM'19)
 SIAM International Conference on Data Mining (SDM'19'18)
 The international conference series on Advances in Social Network Analysis and Mining (ASONAM'18)
 The Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD'18)

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, HTML/CSS
Tools & Platforms: TensorFlow, Keras, PyTorch, Scikit-Learn, AWS, Spark, Google Cloud Platform

AWARDS & HONORS

2020 Summer Research Fellowship	George Mason University, May 2020
Presenter of PhD CS Research Symposium	George Mason University, Mar. 2019
2018 Research Initiation Award	George Mason University, April 2018
Outstanding Graduates of Renmin University of China	Renmin University of China, Oct. 2015
Intel Corporation Goodie Drawer Level II	Intel China, June 2014