Zelun Wang

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Education

Texas A&M University — **College Station, USA**
Ph.D., Computer Science — *2014–2020*

Xi'an Jiaotong University — **Xi'an, China**
B.Eng., Automation — *2010–2014*

Industry Experiences

Machine Learning Engineer — ***Snap, Inc.**, 2020–current*
- Develop perception systems powered by machine learning algorithms to help Snapchat camera understand the real world intelligently

Software Engineer Intern — ***Facebook, Inc.**, 2018*
- Feature engineering with mobile sensor data to optimize the location prediction model for general Facebook infrastructure

Professional Skills

- Tensorflow, Pytorch, Python, C++, Docker, Kubernetes, BigQuery, Hive

Research Area

- Machine Learning, Computer Vision, OCR, Affective Computing

Publications

- **Z. Wang**, J. Liu, "Translating Math Formula Images to LaTeX Sequences Using Deep Neural Networks with Sequence-level Training", *International Journal on Document Analysis and Recognition.* (2021)
- D. Dacunhasilva, **Z. Wang**, R. Gutierrez-Osuna, "Towards Participant-Independent Stress Detection Using Instrumented Peripherals", *IEEE Transactions on Affective Computing.* (2021)
- **Z. Wang**, J. Liu, "PDF2LaTeX: A Deep Learning System to Convert Mathematical Documents from PDF to LaTeX", *ACM Symposium on Document Engineering.* (2020)
- **Z. Wang**, D. Beyette, J. Lin, J. Liu, "Extraction of Math Expressions from PDF Documents based on Unsupervised Modeling of Fonts", *International Conference on Document Analysis and Recognition.* (2019)
- X. Wang, **Z. Wang**, J. Liu, "Bigram Label Regularization to Reduce Over-Segmentation on Inline Math Detection", *International Conference on Document Analysis and Recognition.* (2019)
- J. Lin, X. Wang, **Z. Wang**, D. Beyette J. Liu, "Prediction of Mathematical Expression Declarations based on Spatial, Semantic, and Syntactic Analysis", *ACM Symposium on Document Engineering.* (Best Student Paper, 2019)
- D. Beyette, **Z. Wang**, J. Lin, J. Liu, 'Semi-Automatic LaTeX-Based Labeling of Mathematical Objects in PDF Documents: MOP Data Set", *ACM Symposium on Document Engineering.* (2019)
- D. Beyette, M. Rugh, J. Lin, X. Wang, **Z Wang**, R. Capraro, J. Liu, "DIME: A Dynamic Interactive Mathematical Expression Tool for STEM Education", *Annual Conference of American Society for Engineering Education.* (2019)

- F. Akbar, A. Bayraktaroglu, P. Buddharaju, D. Silva, G. Gao, T. Grover, R. Gutierrez, N. Jones, G. Mark, I. Pavlidis, K. Storer, **Z. Wang**, A. Wesley, S. Zaman, "Email Makes You Sweat: Examining Email Interruptions and Stress with Thermal Imaging", *Proceedings of Human Factors in Computing Systems, ACM Press.* (2019)

- T Jin, J Zhou, **Z Wang**, R Gutierrez-Osuna, C Ahn, W Hwang, K Park, P Lin, "Real-Time Gas Mixture Analysis Using Mid-Infrared Membrane Microcavities", *Journal of Analytical Chemistry.* (2018)

- **Z Wang**, T Jin, P Lin, R Gutierrez-Osuna, "Mixture quantification in the presence of unknown interferences", *The International Symposium on Olfaction and Electronic Nose.* (2017)

- **Z Wang**, A Parnandi, R Gutierrez-Osuna, "BioPad: Leveraging Off-the-Shelf Video Games for Stress Self-Regulation", *Journal of Biomedical and Health Informatics.* (2017)

- C Liberatore, S Aryal, **Z Wang**, S Polsley, R Gutierrez-Osuna, "SABR: Sparse, Anchor-Based Representation of the Speech Signal", *Sixteenth Annual Conference of the International Speech Communication Association.* (2015)

- **Z Wang**, J Wang, S Zhang, Y Gong, "Visual Tracking based on Online Sparse Feature Learning", *Journal - Image and Vision Computing.* (2015)

- S Zhang, J Wang, **Z Wang**, Y Gong, Y Liu, "Multi-target tracking by learning local-to-global trajectory models", *Journal - Pattern Recognition.* (2015)

Services and Teaching

- **Paper reviewer**: CSCW, ICCASP, ISOEN, ICICT, IJERPH
- **Teaching assistant**: CSCE 462: Microcomputer Systems, Texas A&M University, 2018-2020
- **Teaching assistant**: CSCE 121: Introduction to Program Design, Texas A&M University, 2014-2015

Patents

- "A multi-target tracking method by iterating trajectory models", CN201410136574, granted Apr. 2014

Honors and Awards

ACM DocEng Best Student Paper Award: Berlin, Germany *2019*

Undergraduate with University Honors: Xi'an Jiaotong University *2014*

National Encouragement Scholarship: Xi'an Jiaotong University *2013, 2012, 2011*

Outstanding Student Award: Xi'an Jiaotong University *2013, 2012*

Excellent Student Leader Award: Xi'an Jiaotong University *2011*