

# Bin Wang

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Page: <https://binwang28.github.io/>

## RESEARCH INTERESTS

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- Statistical Machine Learning, Deep Learning, Subspace Learning.
- Applications in Natural Language Processing, Computer Vision.

## EDUCATION

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- **University of Southern California (USC)** Los Angeles, USA  
*Ph.D. in Electrical Engineering; Minor in Computer Science; Advisor: C.-C. Jay Kuo*  
Jul 2017 - Present
- **University of Southern California (USC)** Los Angeles, USA  
*M.S. in Electrical Engineering; Advisor: C.-C. Jay Kuo*  
Jul 2017 - May 2019
- **University of Electronic Science and Technology of China (UESTC)** Chengdu, China  
*B.Eng in Electronic Information Engineering; GPA: 92.4/100; Rank: 2/351*  
Sep 2013 - Jun 2017

## EXPERIENCE

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- **Research Assistant; USC** Los Angeles, USA  
*Aircraft Smart Maintenance Project*  
Jul 2017 - Aug 2018
  - **Video Caption:** Built CNN and RNN based model to learn inter-model (visual, language) translation.
  - **Video Summarization:** Incorporated machine learning models for unsupervised video summarization.
  - **Video Communication:** Developed video streaming module using WebRTC on Moverio BT-300 smart glasses.
- **Research Intern; University of Ontario Institute of Technology** Toronto, Canada  
*Advisor: Haoxiang Lang*  
Jul 2016 - Oct 2016
  - **SLAM:** Developed Simultaneous Localization and Mapping on Turtlebot Robot.
  - **Image Processing:** Focused on human hand gesture recognition using RGB-Depth image with Kinect 1.0/2.0.
- **Exchange Student; City University of Hong Kong** Kowloon, HK  
*Electrical and Electronics Engineering; GPA: 4.3/4.3*  
Sep 2015 - Jan 2016

## PUBLICATION

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1. **Graph Representation Learning: A Survey**  
Fenxiao Chen, Yunchen Wang, **Bin Wang** and C-C Jay Kuo  
arXiv Pre-print:1909.00958, 2019.
2. **Evaluating Word Embedding Models: Methods and Experimental Results**  
**Bin Wang\***, Angela Wang\*, Fenxiao Chen, Yunchen Wang, and C.-C. Jay Kuo.  
APSIPA Transactions on Signal and Information Processing, 8, E19, 2019.
3. **K-covers for active learning in image classification**  
Yeji Shen, Yuhang Song, Hanhan Li, Shahab Kamali, **Bin Wang** and C.-C. Jay Kuo.  
2019 IEEE International Conference on Multimedia and Expo (ICME) Workshop. IEEE, 2019.
4. **Deepwalk-assisted Graph PCA (DGPCA) for language networks**  
Fenxiao Chen, **Bin Wang** and C.-C. Jay Kuo.  
2019 International Conference on Acoustics, Speech and Signal Processing (ICASSP). IEEE, 2019.
5. **Post-Processing of Word Representations via Variance Normalization and Dynamic Embedding**  
**Bin Wang**, Fenxiao Chen, Angela Wang, and C.-C. Jay Kuo.  
2019 IEEE International Conference on Multimedia and Expo (ICME). IEEE, 2019.
6. **Hand gesture recognition and motion estimation using the Kinect Sensor**  
**Bin Wang**, Yunze Li, Haoxiang Lang and Ying Wang.  
Mechatronic Systems and Control, 2019.
7. **Graph-based Deep-Tree Recursive Neural Network (DTRNN) for Text Classification**  
Fenxiao Chen, **Bin Wang**, and C.-C. Jay Kuo.  
Spoken Language Technology Workshop (SLT), IEEE, 2018.

## HONORS AND AWARDS

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- Excellent Graduate of Sichuan Province, 2017
- Tanglixin Scholarship, 2017
- National Scholarship, China, 2015 & 2016.
- Outstanding Student Leadership Award, 2014
- Samsung Scholarship, 2014

## TEACHING EXPERIENCE

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- **Department of Electrical and Computer Engineering, USC** Los Angeles, USA  
*Lab TA for Antonio Ortega: EE141L Applied Linear Algebra for Engineering* *Aug 2019 - Dec 2019*
  - Design lab materials, edit exams, conduct office hours, prepare solutions for 100 students.
- **Department of Electrical and Computer Engineering, USC** Los Angeles, USA  
*TA for Robert Popoli: EE483 Introduction to Digital Signal Processing* *Jan 2019 - May 2019*
  - Design discussion materials, lead discussion sessions, conduct office hours, prepare homework solutions, grade exams for 50 students.
- **Department of Electrical and Computer Engineering, USC** Los Angeles, USA  
*TA for Richard M. Leahy: EE483 Introduction to Digital Signal Processing* *Aug 2018 - Dec 2018*
  - Design discussion materials, lead discussion sessions, conduct office hours, prepare homework solutions, grade exams for 80 students.

## SKILLS SUMMARY

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- **Languages:** English, Mandarin
- **Programming Languages:** Python, C, C++, Matlab
- **Tools:** Tensorflow, PyTorch, Sklearn, MatConvNet, Linux, Git, L<sup>A</sup>T<sub>E</sub>X, WebRTC
- **Experience:** Machine Learning, Deep Learning, Natural Language Processing, Computer Vision

Last Update: 10/08/19