

# Ziniu Hu |

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## Education

### University of California, Los Angeles

*Ph.D. in Computer Science*

Advisor: Prof. Yizhou Sun

Los Angeles, USA

Sep. 2018 – Present

### Peking University

*B.Sc. in Computer Science*

Beijing, China

Sep. 2014 – Jun. 2018

## Research Interests

My research focus on utilizing deep learning to learn representation and capture dependency of structured data, with their applications in natural language processing and graph mining.

## Selected Publications

1. **Layer-Dependent Importance Sampling for Training Deep and Large Graph Convolutional Networks**
  - Difan Zou\*, **Ziniu Hu**\* (equal contribution), Yewen Wang, Song Jiang, Yizhou Sun, Quanquan Gu
  - In Proceedings of Conference on Neural Information Processing Systems. **NeurIPS 2019**.
2. **Few-Shot Representation Learning for Out-Of-Vocabulary Words**
  - **Ziniu Hu**, Ting Chen, Kai-Wei Chang, Yizhou Sun
  - In Proceedings of Conference of the Association for Computational Linguistics. **ACL 2019**.
3. **Unsupervised Pre-Training of Graph Convolutional Networks**
  - **Ziniu Hu**, Changjun Fan, Ting Chen, Kai-Wei Chang, Yizhou Sun
  - ICLR 2019 Workshop: Representation Learning on Graphs and Manifolds.
4. **Unbiased LambdaMART: An Unbiased Pairwise Learning-to-Rank Algorithm**
  - **Ziniu Hu**, Yang Wang, Qu Peng, Hang Li
  - In Proceedings of the World Wide Web Conference. **WWW 2019**.
5. **Listening to Chaotic Whispers: Deep Learning Framework for News-oriented Stock Trend Prediction**
  - **Ziniu Hu**, Weiqing Liu, Jiang Bian, Xuanzhe Liu, Tie-Yan Liu
  - In Proceedings of International Conference on Web Search and Data Mining. **WSDM 2018**.
6. **Emoji-Powered Representation Learning for Cross-Lingual Sentiment Classification**
  - Zhenpeng Chen, Sheng Shen, **Ziniu Hu**, Xuan Lu, Qiaozhu Mei, Xuanzhe Liu
  - In Proceedings of the World Wide Web Conference. **WWW 2019 (Best Long Paper Award)**.
7. **LinkRadar: Assisting the Analysis of Inter-app Page Links via Transfer Learning**
  - Diandian Gu, **Ziniu Hu**, Yun Ma
  - In Proceedings of International Conference on Information and Knowledge Management. **CIKM 2019**.
8. **Aladdin: Automating Release of Deep-Link APIs on Android**
  - Yun Ma, **Ziniu Hu**, Yunxin Liu, Tao Xie, Xuanzhe Liu
  - In Proceedings of the World Wide Web Conference. **WWW 2018**.

## Research Experience

### University of California, Los Angeles

*Graduate Research Assistant*

### Scalable Analytics Institute (ScAi)

*Sep. 2018 – Present*

- Advisor: Prof. Yizhou Sun
- Worked on ‘Few-Shot Representation Learning for OOV Words’, published a paper on ACL’19.
- Worked on ‘Large-Scale GNN Training via Efficient Sampling’, published a paper on NeurIPS’19.

### Microsoft Research Redmond

*Research Intern*

### Microsoft Academic Graph

*Jun. 2019 – Sep. 2019*

- Mentor: Dr. Yuxiao Dong
- Working on ‘Pre-training GNN on Billion Scale Heterogeneous Network’.

**Bytedance (Toutiao) AI Lab**  
*Research Intern*

**NLP Group**  
*Feb. 2018 – Aug. 2018*

- Mentor: Dr. Hang Li
- Worked on ‘Unbiased Pairwise Learning-to-rank’.
- Proposed a general framework of unbiased learning-to-rank in the pairwise setting, *Unbiased LambdaMart*. Achieved 2.64% enhancement of Toutiao’s first position click ratio. Published a paper on WWW’19.

**Microsoft Research Asia**  
*Research Intern*

**Machine Learning Group**  
*Feb. 2017 – Aug. 2017*

- Mentor: Dr. Jiang Bian
- Worked on ‘News-based Stock Trend Prediction’.
- Use online financial news to predict Chinese stock trend. Proposed a hybrid attention RNN architecture, and self-paced learning mechanism to deal with various noise. Published a paper on WSDM’18.

**Peking University**  
*Undergraduate Research Assistant*

**DAAS (Data, Analytics, Application, System) Lab**  
*Sep. 2015 – Jun. 2018*

- Advisor: Prof. Xuanzhe Liu and Prof. Qiaozhu Mei
- Worked on research projects including emoji-based cross-lingual sentiment analysis, GUI design automation, Android deep link generation and user navigation behavior analysis.
- Published papers on WWW’19, HotMobile’19, CIKM’19 and WWW’18.

## Teaching Experience

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**2019 Fall:** Teaching Assistant for UCLA CS 146: Introduction to Machine Learning

**2019 Spring:** Give a lecture for UCLA CS 168: Computational Methods for Medical Imaging

## Honors and Awards

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**2019:** WWW 2019 Best Long Paper Award

**2018:** PhD Fellowship of University of California, Los Angeles

**2018:** Ranked 8th in CIKM-Cup 2018: Cross-Lingual Short-Text Matching of Question Pairs.

**2017:** SenseTime Scholarship

**2017:** SIGIR Student Travel Grant

**2017:** Outstanding Undergraduate Research Award of Peking University

**2015:** May Forth Scholarship of Peking University

**2014:** First Prize of Chinese Physics Olympiad, Zhejiang District

## Services

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- Program Committee: CIKM 2019, SoCal-NLP 2019
- Reviewer: ICDE 2020, KDD 2019, KDD 2018