Zifeng Wang 王子丰

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EDUCATION BACKGROUND

Tsinghua University   **Shenzhen, China**
M.S., Data Science, Tsinghua-Berkeley Shenzhen Institute (TBSI)   *Sept. 2018-Present*
GPA: 3.5/4.0; Major course: *Machine learning, Computer vision, Information theory*; TA: *Machine learning, 19 Fall* [code]
Co-advised by: Prof. Shao-Lun Huang, TBSI and Prof. Khalid M. Mosalam, UC-Berkeley

Tongji University   **Shanghai, China**
B.Eng., Structural Engineering, School of Civil Engineering   *Sept. 2014-Jun. 2018*
GPA: 4.4/5.0, Top(19/168); Advised by: Prof. Suzhen Li

INDUSTRY EXPERIENCE

Jarvis Lab, Tencent   **Shenzhen, China**
Research intern in Machine learning   *Dec. 2019-Present*

- Join research in Graph Neural Networks (GNN) for query analysis and recommendation.
- Lead research in counterfactual learning without randomized trials for debiasing policy and improving fairness.
- Lead research in semi-supervised learning with a pseudo-label based meta learning approach.

Noah's Ark Lab, Huawei   **Shenzhen, China**
Research intern in Recommender system   *Apr. 2019-Oct. 2019*

- Join in counterfactual learning for improving ad-click rates by exploiting non-displayed events, and publish in CIKM 2019.
- Join in one class field-aware factorization machine for queries recommendation with implicit feedback, submit to JMLR.
- Lead research in guiding data subsampling for better model with less data, based on influence function and robust supervised learning theory, which is applicable for highly sparse data ($> 10M$ dims), publish in AAAI 2020 (ML track, score 8,7,6; accept rate: 18%).

RESEARCH & PROJECTS

Research in Counterfactual learning and Semi-supervised learning   **Shenzhen, China**
Work in progress   *Sept. 2019- Present*

- Research in sparse logged feedback, that observed labeled user-item pairs are much smaller than all possible pairs, which causes unfair and biased policy in practice. The proposed *Learning-from-Counterfactuls* method can alleviate it in our preliminary results, plan to submit the work to ICML 2020.
- Research in a pseudo-label approach for semi-supervised learning, based on my previous Influence Data Subsampling work, which has been proved effective in label imputation and calibration.

RGB-Depth Camera for Semantic Segmentation   **Shenzhen, China**
Work with Prof. Khalid M. Mosalam, UC-Berkeley   *Mar. 2019- Present*

- Research in fusing RGB and Depth image for semantic segmentation, with an encoder-decoder architecture.
- Validate our method on the construction site in Shenzhen, submit our work to a SCI Q1 journal.

Smart Robot Development [code]   **Shenzhen, China**
Work with Prof. Shao-Lun Huang and Prof. Lin Zhang, in TBSI Lab 2C   *Feb. 2019- Aug. 2019*

- Develop face recognition module on MTCNN and pretrained InceptionV1 for 1:N face verification.
- Develop indoor object detection module based on YOLO-V3, and object tracking module on Siamese FCN.

PAPERS

- **Zifeng Wang**, Hong Zhu, Zhenhua Dong, Xiuqiang He and Shao-Lun Huang. *Less Is Better: Unweighted Data Subsampling via Influence Function.* **AAAI 2020**. [pdf][code]
- **Zifeng Wang**, Yuyang Zhang, Khalid M. Mosalam, Yuqing Gao and Shao-Lun Huang. *Deep Fusion Network with RGB-Depth Image for Pixel-level Semantic Segmentation on Construction Sites.* **Automation in Construction**. (under review)
- **Zifeng Wang** and Suzhen Li. *Data-driven Risk Assessment on Urban Pipeline Network Based on a Cluster Model.* **Reliability Engineering and System Safety**. (2nd turn review)

SKILLS & CERTIFICATION

- English: CET-6 (615), IELTS (7.0)
- IT: Linux, Python, C and Python packages including Pytorch, Tensorflow, Numpy, Scipy, pandas, Sklearn, keras, etc.

AWARDS & ACHIEVEMENTS

- Outstanding graduate student (4/40), graduate thesis (3/168) of Tongji University   *Jun. 2018*
- Merit student scholarship of Tongji University   *2015/2016/2017*
- Kaggle: KKBox Music Recommendation Challenge (151/1081,15%)   *Dec. 2017*
- Meritorious winner (1st class prize,$\approx 7\%$) in USA Mathematical Contest in Modeling   *Apr. 2017*