ERZHUO SHAO

Department of Electronic Engineering
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EDUCATION

Tsinghua University Beijing, China
B.Eng. in Department of Electronic Engineering Sep 2016 – Jun 2020
Tsinghua University Beijing, China
MPhil. in Department of Electronic Engineering Sep 2020 – June 2021

- GPA: 3.8/4.0

Johns Hopkins University Maryland, US
M.Eng. in Department of Biomedical Engineering Future

RESEARCH EXPERIENCE

Future Communication & Internet Lab, Department of Electronic Engineering, Tsinghua University
Associate Professor Yong Li Sep 2017 – Present

Erzhuo Shao, F. Xu, Y. Li. **Exploration Restriction and the Vulnerability of Contact Network**

- Explore the correlation between agents' movements and transmission network, supported by a contact-based transmission simulation with real-world mobile data. Develop a soft lockdown measure which could more effectively contain the epidemic in transmission network.
- Combining with a series of vaccination strategies, we proved exploration restriction would increase the vulnerability of contact network. The cross-community connection becomes much more sparser so vaccination policy gains higher relative effectiveness.

Erzhuo Shao*, J. Feng*, T. Xia, Y. Li. **One-shot Learning for Population Mapping, *submitted to CIKM2021***

- The first to research one-shot learning scenario in population mapping problem, which aims to infer fine-grained population distribution based on coarse-grained distribution.
- Design an advanced transfer learning model including spatiotemporal modeling, GAN-based data augmentation, and adversarial domain adaptation, which have advantage over meta-learning method.
- Experiments in extensive scenarios including cross-cities knowledge transferring and cross-granularities transferring.

[TKDE]* *Erzhuo Shao, H. Wang, J. Feng, T. Xia, H. Yang, L. Geng, D. Jin, Y. Li, ***Intention-aware Fine Grained Crowd Flow Generation via Deep Neural Networks, in TKDE.***

- Generate intention-aware crowd flow based on Point of Interest (POIs) distribution.
- An effective generative system with multi-task training to model the relationship between static POI distribution and dynamic intention-aware crowd flow.

Computational Approaches to Human Learning (CAHL) lab, UC Berkeley School of Information
Associate Professor Zachary A. Pardos June 2019 – Present

[AAAI]* *Erzhuo Shao, S. Guo, Z. Pardos. Degree Planning with PLAN-BERT: Multi-Semester Recommendation Using Future Courses of Interest, ***in AAAI 2021***.

- The first to research the consecutive basket recommendation problem with pre-selected future reference items.
- Research the effect of user and item features in self-attention contextual embedding architecture.
- Present an approach for multiple consecutive basket prediction without auto-regression.
- Already deployed to serve students in Berkeley in course selection system.

ADDITIONAL INFORMATION

Additional Professional and Extracurricular Experiences

The admission department of Tsinghua University, *volunteer* Jun 2017 – Present

- Participate in volunteer activity for two times per year. Provided consulting service and introduction about the academic and daily life in each department of Tsinghua University to many graduates of high schools and their parents in Tianjin.