Wei Tian

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EDUCATION

Sept. 2017 – Jul. 2020	Master of Engineering in Computer Technology, **Sichuan University**
	Supervisor: Prof. Min Zhu
	Avg Score: 84.00 / 100 **GPA**: 3.45 / 4.0 **Rank**: Top-20
Sept. 2013 – Jul. 2017	Bachelor of Engineering in Computer Science and Technology, **Sichuan University**
	Avg Score: 87.52 / 100 **GPA**: 3.52 / 4.0 **Rank**: 24th out of 361 **First Class Honors**

RESEARCH INTERESTS

Data Management, Knowledge Discovery and Data Mining, Information Visualization

RESEARCH EXPERIENCE

Aug. 2020 – Present	*NoSQL Storage Engine for Big Trajectory Data Management and Analysis*

Research Intern in Database and Storage Laboratory, **Alibaba DAMO Academy**.
- ❖ Propose a Segment-based model to storing massive trajectory data, which saves about 3x – 4x storage cost.
- ❖ Based on the Segment-based model, make the query performance of five basic categories 2x faster than existing methods.
- ❖ Based on HBase, develop a storage engine for trajectory data.

Aug. 2019 – Dec. 2019   *Research on visualization recommendation for relational data based on visual analytical task*

ISAR (Information Storage, Analysis and Retrieval) Research Group, **RMIT University**.

Visiting Student   **RMIT Supervisor**: Associate Professor Zhifeng Bao
- ❖ Propose an end-to-end joint embedding learning framework, which aims to learn the association between Data-Task and visualization Views.
- ❖ Propose a recommendation algorithm for visualization by fusing dataset features, analytical task features and visualization features with attention mechanism.

Jan. 2019 – Apr. 2019   *A Carpooling Algorithm Based on Region Division Using Trajectory Data*
- ❖ Propose a dividing urban area algorithm based on trajectory data by considering traffic conditions and semantic information in sub-regions.
- ❖ Propose a new carpooling model based on sub-regions by pruning the search space of matching riders and vehicles in region-level.

May 2018 – May 2019   *Research on selection pattern of advertising targets based on visual analysis*

Project supported by **Tencent Rhino Bird Program** (Grant No. 18H0487) (¥200,000)

Research Assistant
- ❖ Model the advertising behaviors of advertisers with multiple dimensions, such as industry type and product type.
- ❖ Analyze effect and relationship of targets, discovering classic cases and patterns in targets system.
- ❖ Publish one paper (**Publication #1**)

Jan. 2018 – Dec. 2019   *Visual recommendation system based on user-generated content of tourism*

Project supported by **Sichuan Science and Technology Program of China** (Grant No. 2018GZ0171) (¥200,000)

Research Assistant
- ❖ Mine the frequent patterns of travel sequences from the massive travel blog contents by using NLP methods.
- ❖ Detect tourism area and popular local trip route.

Feb. 2018 – May 2018   *Visual Approach to Explore Evolution of Dynamic Multivariate Network*
- ❖ Propose a network visualization method based on community partitioning and hierarchical progress (group network exploration).
- ❖ Design a vertical stacking and adjustable network visualization method (ego-centric network exploration)
- ❖ Publish one paper (**Publication #2**)

Oct. 2017 – Jan. 2018	*Expert Recommendation in Community Question Answering*

❖ Classify expertise metrics into community-level, topic-level and question-level, then propose a question-level expertise modeling method.
❖ Propose an expert recommendation algorithm by incorporating authority, interest and expertise.
❖ Publish one paper (**Publication #3**)

Jul. 2018	**Teaching Assistant** in 7th University Immersion Program of SCU.
Sept. 2017 – Jan. 2018	**Teaching Assistant** in Computer Network Course of SCU Undergraduate.

PUBLICATIONS

[1] Di Peng, **Wei Tian**, Min Zhu, Yukun Ren, Xiaojian Lin, Mingzhao Li. TargetingVis: Visual Exploration and Analysis of Targeted Advertising Data. *Journal of Visualization,* 2020, 23: 1113–1127*.* DOI: 10.1007/s12650-020-00671-w (SCI, IF: 0.911)

[2] Di Peng, **Wei Tian**, Binbin Lu, Min Zhu. DMNEVis: A Novel Visual Approach to Explore Evolution of Dynamic Multivariate Network. *IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, 2018, pp. 4304–4311. DOI: 10.1109/SMC.2018.00728 (CCF-C)

[3] Min Zhu, **Wei Tian**, Di Peng, Yabo Su, Hao Niu. Method of Predicting User Professionalism Based on Question Granularity in Community Question Answering. *Advanced Engineering Sciences*, 2019, 51(1): 173-180. DOI: 10.15961/j.jsuese.201800128 (EI, IF: 1.068) (导师一作，学生二作)

[4] Min Zhu, Jianhua Wang, Xiaowei Li, **Wei Tian**. Fast Percentage Closer Soft Shadows. *Advanced Engineering Sciences*, 2019, 51(4): 140-146. DOI: 10.15961/j.jsuese.201900003 (EI, IF: 1.068)

[5] Min Zhu, Li Chen, Qin Li, **Wei Tian**, et.al. Book: Handbook of Computer Network Course Projects (in Chinese: 计算机网络课程设计). *China Machine Press (机械工业出版社)*, ISBN: 978-7-111-61139-4, 2018.

[6] 朱敏, 彭第, 韦东鑫, **田伟**, 李亚男, 任宇堃, 林晓健. 层次数据的关联关系可视化处理方法、服务器及存储介质: 中国, 201911287989.8[P]. (国家发明专利, 已提交申请)

[7] 朱敏, 李亚男, 彭第, 游思兰, 韦东鑫, **田伟**. 一种气泡层次可视化中气泡分离方法: 中国, 201811300412.1[P]. (国家发明专利, 实质性审查阶段)

ACADEMIC ACTIVITIES

- **External Reviewer** for IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC'2018)
- China Visualization and Visual Analytics Conference (Chengdu'2019, Qingdao'2017)
- ACM Turing Celebration Conference - China (Chengdu'2019)
- China National Computer Congress (Hangzhou'2018)
- Big Data Visualization Summit Forum (Chengdu'2017)
- CCF (China Computer Federation) Student Member

REPRESENTATIVE AWARDS

- Outstanding Master Graduates of Sichuan University (2020)
- First-class of Excellent Postgraduate Scholarship by Sichuan University (2019)
- Outstanding Postgraduate of Sichuan University (2019)
- HUAWEI Scholarship of Sichuan University (2018)
- Outstanding student member of Sichuan University Branch of CCF (2018)
- Honorable mention of ChinaVis Data Challenge (Qingdao'2017)
- Outstanding Student of Sichuan University (2016)
- 2×National Encouragement Scholarship (2014, 2016)
- 2×Third-class of Excellent Undergraduate Scholarship by Sichuan University (9%) (2014, 2016)
- Second Prize of Sichuan Regional Contest of 7th Lan Qiao Cup (2016)