Shunan Guo

3663 North Zhongshan Road, ShangHai, China
✉ g.shunan@gmail.com | 📱 (+86)150 0213 0975 | 🏠 sites.google.com/view/sguo

EDUCATION

East China Normal University   ShangHai, China
Ph.D. in Computer Science and Software Engineering   Sep 2016 – Dec 2019

- **Supervisor**: Prof. Hongyuan Zha, Prof. Nan Cao
- **Research Interests**: Visual Analytics for Event Sequences
- **Thesis**: Visual Summarization of Temporal Event Sequences

East China Normal University   ShangHai, China
B.S. in Software Engineering   Sep 2012 – June 2016

RESEARCH / WORK EXPERIENCE

Tencent CSIG Jarvis Lab   ShangHai, China
Research Intern in Medical Data Security Platform   May 2019 - Oct 2019

- **Advisor**: Dr. Ting Chen
- Developed anomaly detection algorithms for identifying malicious software behaviors.
- Designed and implemented a visualization prototype for understanding and exploring anomalous software behaviors.

Adobe Research   San Jose, US
Data Science Research Intern in Systems Technology Lab   Apr 2018 - Oct 2018

- **Advisor**: Dr. Fan Du, Dr. Sana Malik
- Developed *ProFlow*, a visual analytics system for analyzing uncertainty and alternatives in event sequence predictions.
- Applied *ProFlow* in analyzing the prediction for web clickstreams on Adobe.com.
- The visualization design of *ProFlow* was accepted by **CHI'19**.

Tongji University   ShangHai, China
Research Assistant in iDVx Lab of College of Design and Innovation   Nov 2016 - Present

- **Advisor**: Prof. Nan Cao

Project EventThread

- Developed algorithms for summarizing latent progression patterns in large-scale event sequences.
- Implemented a visual analytics tool, *EventThread*, for better understanding and exploration of the analysis result.
- *EventThread* was accepted by **IEEE VIS'17** and **IEEE TVCG**.

Project ECGLens

- Developed algorithm and a visualization system, namely *ECGLens*, for detecting arrhythmia in electrocardiogram signals.
- *ECGLens* was accepted by **CHI'18** and was awarded **best paper honorable mention**.

Project EventThread2

- Proposed a progression analysis algorithm for extracting latent stages in event sequence data.
- Built *EventThread2*, a visual interface for analyzing and interpreting the stage analysis result.
- *EventThread2* was accepted by **IEEE VIS'18** and **IEEE TVCG**.

Project CarePre

- Participated in the development of *CarePre*, an intelligent clinical decision assistance system.
- *CarePre* was accepted by **ACM Transactions on Computing for Healthcare**.

New York University ShangHai   ShangHai, China
Research Assistant in Computer Systems Engineering   Feb 2016 - Dec 2017

- **Advisor**: Prof. Nan Cao
- Designed a visual analytics approach for analyzing treatment plans of Community Acquired Pneumonia patients in ShangHai Children's Hospital. The paper was accepted by **Workshop on Visual Analytics in Healthcare, 2016**
- Performed academic tutoring in Information Visualization courses and provided assistance to professors and students in laboratory exercises.

Publications

1. Fan Du, **Shunan Guo**, Sana Malik, Eunyee Koh, Sungchul Kim, Zhicheng Liu. Interactive Event Sequence Prediction for Marketing Analysts. *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems.*

2. **Shunan Guo**, Zhuochen Jin, Qing Chen, David Gotz, Hongyuan Zha, Nan Cao. Visual Anomaly Detection in Event Sequence Data. *2019 IEEE Conference on Big Data (Short paper).*

3. Zhuochen Jin, Shuyuan Cui, **Shunan Guo**, David Gotz, Jimeng Sun, Nan Cao. CarePre: An Intelligent Clinical Decision Assistance System. *ACM Transactions on Computing for Healthcare, 2020, Volume 1, Number 1: 1-20.*

4. **Shunan Guo**, Fan Du, Sana Malik, Eunyee Koh, Sungchul Kim, Zhicheng Liu, Donghyun Kim, Hongyuan Zha, Nan Cao. Visualizing Uncertainty and Alternatives in Event Sequence Predictions. *In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 2019.*

5. **Shunan Guo**, Zhuochen Jin, David Gotz, Fan Du, Hongyuan Zha, Nan Cao. Visual Progression Analysis of Event Sequence Data. *IEEE Transactions on Visualization and Computer Graphics (TVCG), Volume 25, Number 1, 2019.*

6. Chaoguang Lin, Qiuhan Zhu, **Shunan Guo**, Zhuochen Jin, Yu-Ru Lin, Nan Cao. Anomaly detection in spatiotemporal data via regularized non-negative tensor analysis. *Data Mining and Knowledge Discovery (DMKD),Volume 32, Issue 4, pp 1056–1073, July 2018.*

7. Ke Xu, **Shunan Guo**, Nan Cao, David Gotz, Aiwen Xu, Huamin Qu, Zhenjie Yao, Yixin Chen. ECGLens: Interactive Visual Exploration of Large Scale ECG Data for Arrhythmia Detection. *In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 2018.* [**Best Paper Honorable Mention**]

8. **Shunan Guo**, Ke Xu, Rongwen Zhao, David Gotz, Hongyuan Zha, Nan Cao. EventThread: Visual Summarization and Stage Analysis of Event Sequence Data. *IEEE Transactions on Visualization and Computer Graphics (TVCG), Volume 24, Number 1, 2018.*

9. **Shunan Guo**, Chaoguang Lin, David Gotz, Bo Jin, Hongyuan Zha, Linhua Shu, Nan Cao. Understanding Care Plans of Community Acquired Pneumonia Based on Sankey Diagram. *Workshop of Visual Analytics in Healthcare, 2016.*

Invited Talks

Visual Analytics for Electronic Health Records	ChengDu, China
Panel "Visualization of Medical Health Data", ChinaVis Conference	July 2019
Visualizing Uncertainty and Alternatives in Event Sequence Predictions	Glasgow, UK
ACM CHI Conference	May 2019
Visual Progression Analysis of Event Sequence Data	Berlin, Germany
IEEE VIS Conference	Oct, 2018
EventThread: Visual Summarization and Stage Analysis of Event Sequence Data	Online
Graphics And Mixed Environment Seminar	Nov, 2017
EventThread: Visual Summarization and Stage Analysis of Event Sequence Data	Phoenix, AZ, U.S.
IEEE VIS Conference	Oct, 2017

Sevices

Reviewer of

• SIGCHI Conference on Human Factors in Computing Systems (CHI)	2020
• IEEE Transactions on Visualization and Computer Graphics (TVCG)	2019, 2020
• Future Generation Computer Systems	2020
• Transactions on Knowledge and Data Engineering(TKDE)	2020
• IEEE VIS Conference Short Papers	2019
• Journal of Computers & Graphics	2019
• IEEE Pacific Visualization Symposium (PacificVis)	2019
• ACM CHI Late Breaking Work	2019, 2020
• China Visualization and Visual Analytics Conference	2018, 2019

Student Volunteer of

• ACM CHI	2019
• IEEE VIS	2017, 2018