Minjeong Shin

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🎓 Education

Ph.D. in Computer Science　　　　　　　　　　*Australian National University, Australia*
Aug 2018 - Jul 2024

- Thesis: Visual Analytics of Evolving Graphs
- Research interest: Visual analytics, Human-centered computing, Big data visualization

Master of Science in Computer Science　　　　　　　　　　*KAIST, Korea*
Mar 2009 - Aug 2011

- Thesis: Achieving Bandwidth Guarantees in Virtual Data Centers using the Hose Model
- Examine network traffic data on on-chip network to introduce a new scalable power-efficient structure

Bachelor of Science in Computer Science　　　　　　　　　　*KAIST, Korea*
Mar 2004 - Feb 2009

Exchange Programs

Interchange student, Sep 2006 – Feb 2007　　　　　　*Fudan University, Shanghai, China*
Summer session, Jul 2006 – Aug 2006　　　　　　　　*UCSD, San Diego, USA*

💼 Work Experience

Post Doctoral Researcher　　　　　　　　　*Australian National University, Australia*
Feb 2026 - Current

Post Doctoral Researcher　　　　　　　　　　*POSTECH, Korea*
Jul 2025 - Jan 2026

- Systematically analyze LLMs' network visualization performance and established design guidelines.
- Develop interfaces, benchmark datasets, and evaluation metrics to implement LLM-based systems for visualization quality improvement.

Chief Technical Officer　　　　　　　　　　*HSJ & Company, Korea*
Dec 2021 - Jan 2025

- Led the technical team to design and implement advanced algorithms to optimize tax planning strategies for users.
- Developed a visual analytics tool that enhanced the understanding of property taxes and supported decision-making in property transfer planning.
- Built an LLM-based chatbot to provide users with clear, accessible explanations of the generated tax planning strategies.

Research Engineer　　　　　　　　　　*ANU College of Engineering and*
Sep 2016 - Dec 2021　　　　　　　　　　*Computer Science, Australia*

- Developed tools for visualizing knowledge graphs, linking large collections of images with descriptive metadata.

- Created multimedia event summary documents by filtering and clustering extracted media features.

Junior Research Engineer   *Creative Innovation Center*
Aug 2011 - May 2015   *LG Electronics, Korea*

- Developed IoT devices to control legacy home appliances and wearables.
- Designed a new UI/UX platform for Real-time OS and customized Android systems.
- Built communication protocols between devices and smartphones via Bluetooth and developed a smartphone app for device control.
- Developed gesture interfaces for edge-bended smartphones on Android, along with device drivers and firmware for touch sensors.

Research Intern   *Wireless & Network Group*
Aug 2010 - Feb 2011   *Microsoft Research Asia, China*

- Conducted research on traffic models and topologies for data center networks.
- Developed a new traffic model with enhanced locality awareness to ensure bandwidth guarantees.

Campus Ambassador   *Sun Microsystems, Inc., Korea*
Sep 2008 - Feb 2009

- Organized and managed the second university Java algorithm contest. Served as a session translator at Sun Tech Day 2008 in Seoul.

Engineering Intern   *Web-robot Development Team*
Mar 2008 - Sep 2008   *Naver Corporation, Korea*

- Analyzed page URL patterns and developed web page crawlers to improve data indexing efficiency.

Publications

1. D. Jeong, H. Lee, **M. Shin**, J. Kim, C. Lee, S. Cho, H. Jeon, and S. Ko. I feel we are together: How people perceive personalized face-swapped gifs in text-based communication. *ACM Conference on Human Factors in Computing Systems*, 2026

2. J. Kim, S. Cho, D. M. Nguyen, J. Jeon, **M. Shin**, and S. Ko. "Here, let me help": An empirical study of user interventions in human–web agent collaboration. *ACM Conference on Human Factors in Computing Systems*, 2026

3. **M. Shin**. *Visual Analytics of Evolving Graphs*. **PhD Thesis**, Australian National University, Jul 2024

4. J. Kim, H. Lee, D. M. Nguyen, **M. Shin**, B. C. Kwon, S. Ko, and N. Elmqvist. DG comics: Semi-automatically authoring graph comics for dynamic graphs. *IEEE Transactions on Visualization and Computer Graphics*, 2024

5. **M. Shin**, J. Kim, Y. Han, L. Xie, M. Whitelaw, B. C. Kwon, S. Ko, and N. Elmqvist. Roslingifier: Semi-automated storytelling for animated scatterplots. *IEEE Transactions on Visualization and Computer Graphics*, 2023

6. T. D. Nguyen, G. Lyall, A. Tran, **M. Shin**, N. G. Carroll, C. Klein, and L. Xie. Mapping topics in 100,000 real-life moral dilemmas. In *Proceedings of the International AAAI Conference on Web and Social Media*, 2022

7. **M. Shin**, A. Tran, S. Wu, A. Mathews, R. Wang, G. Lyall, and L. Xie. Attentionflow: Visualising influence in networks of time series. In *Proceedings of the 14th ACM International Conference on Web Search and Data Mining*, 2021

8. **M. Shin**, A. Soen, B. T. Readshaw, S. M. Blackburn, M. Whitelaw, and L. Xie. Influence flowers of academic entities. In *2019 IEEE Conference on Visual Analytics Science and Technology*, 2019

9. E. Berger, S. M. Blackburn, C. Brodley, H. Jagadish, K. S. McKinley, M. A. Nascimento, **M. Shin**, K. Wang, and L. Xie. GOTO rankings considered helpful. *Communications of the ACM*, 62(7), 2019

10. **M. Shin**, D. Kim, J. H. Lee, U. Bista, and L. Xie. Visualizing graph differences from social media streams. In *Proceedings of the Twelfth ACM International Conference on Web Search and Data Mining*. Association for Computing Machinery, 2019

11. U. Bista, A. Mathews, **M. Shin**, A. K. Menon, and L. Xie. Comparative document summarisation via classification. In *Proceedings of the AAAI Conference on Artificial Intelligence*, 2019

12. D. Chen, D. Kim, L. Xie, **M. Shin**, A. K. Menon, C. S. Ong, I. Avazpour, and J. Grundy. Pathrec: Visual analysis of travel route recommendations. In *Proceedings of the Eleventh ACM Conference on Recommender Systems*. ACM, 2017

13. J. Lee, H. Kim, **M. Shin**, J. Kim, and J. Huh. Mutually aware prefetcher and on-chip network designs for multi-cores. *IEEE Transactions on Computers*, 63(9), Sept 2014

14. **M. Shin**. *Achieving bandwidth guarantees in virtual data centers using the hose model*. **Master Thesis**, KAIST, Aug 2011

15. **M. Shin** and J. Kim. Leveraging torus topology with deadlock recovery for cost-efficient on-chip network. In *2011 IEEE 29th International Conference on Computer Design*, Oct 2011

16. J. Lee, **M. Shin**, H. Kim, J. Kim, and J. Huh. Exploiting mutual awareness between prefetchers and on-chip networks in multi-cores. In *2011 International Conference on Parallel Architectures and Compilation Techniques*, Oct 2011

17. **M. Shin**, C. Guo, and J. Kim. Achieving bandwidth guarantees in virtual data centers using the hose model. In *The USENIX Workshop on Hot Topics in Cloud Computing (HotCloud), Poster*, June 2011

🧪 Patents

1. Method and System for Visualizing Data Differentiation. US20220067273
2. An insole, A digital device and method for controlling the same. KR1020150102976
3. Mobile terminal and method for controlling the same. KR1020150093417
4. Insole, mobile terminal and method of controlling therefor. US20160366266
5. An insole, A mobile terminal and method for controlling the same. KR1020150082430
6. Terminal and method for controlling an output of AV data thereof. KR1020140021118
7. Mobile terminal and method for providing three-dimensional images thereof. KR1020140021116
8. Wearable glass-type device and method of controlling the device. KR1020130139293
9. Mobile terminal. KR1020130011661
10. Routing system and method using torous topology in on-chip network. KR1020110142500

🏆 Awards

1. Women in Data Science Award, Data to Decisions CRC, Australia, 2017