## Ziming Li, Ph.D.

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https://zimingli.info/

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My research interest is developing advanced dialogue systems, including both open-domain and task-oriented dialogue systems. I'm also interested in the fields of information retrieval and optimizing interactive systems by learning from users.



### **Education and Experience**

07/2021 – present Applied Scientist, Amazon Alexa AI, Seattle, USA

03/2021 - 05/2021 Post-doc, University of Amsterdam, Netherlands

Supervisor: Prof. Dr. Evangelos Kanoulas

Research Topic: Dialogue systems and Learning through interaction

09/2016-02/2021 PhD Candidate, University of Amsterdam, Netherlands

Supervisor: Prof. Dr. Maarten de Rijke Co-Supervisor: Dr. Julia Kiseleva

Research Topic: Information Retrieval, Dialogue systems and Inverse Rein-

forcement Learning

09/2013 - 07/2016 M.Sc. Computer Science, Xiamen University, China

Supervisor: Dr. Xiangrong Liu

Research Topic: Membrane Computing, Bioinformatics

Thesis Title: Research on Some Mathematical Problems Based on Time-free

P Systems (9.2/10, Outstanding Master Thesis Title)

09/2009 - 07/2013 | B.Sc. Computer Science, Xiamen University, China

Thesis Title: Parameterization of Triangular Meshes (graded 8.9/10, Out-

standing Bachelor Thesis Title)

## **Internships**

05/2019 - 08/2019 📕 Deep Learning Group, Microsoft Research, Redmond

05/2020 - 08/2020 Amazon Alexa, Seattle (virtual internship)

#### **Research Publications**

- **Li**, **Z.**, Kiseleva, J. & de Rijke, M. (2021). Improving response quality with backward reasoning in open-domain dialogue systems. *SIGIR 2021*.
- **Li**, **Z.**, Park, D., Kiseleva, J., Kim, Y.-B. & Lee, S. (2021). A data-driven approach to estimate user satisfaction in multi-turn dialogues. arXiv preprint arXiv:2103.01287.
- 3 Li, Z., Kiseleva, J., Agarwal, A., de Rijke, M. & White, R. W. (2020). Optimizing interactive systems via data-driven objectives. *arXiv preprint arXiv:2006.12999*.
- Li, Z., Kiseleva, J. & de Rijke, M. (2020). Rethinking supervised learning and reinforcement learning in task-oriented dialogue systems. *Findings of EMNLP 2020*.
- **Li**, **Z.**, Lee, S., Peng, B., Li, J., Kiseleva, J., de Rijke, M., ... Gao, J. (2020). Guided dialogue policy learning without adversarial learning in the loop. *Findings of EMNLP 2020*.

- 6 Li, Z., Kiseleva, J., Agarwal, A. & de Rijke, M. (2019). Learning data-driven objectives to optimize interactive systems. LIRE workshop, NeurIPS 2019.
- 7 Li, Z., Kiseleva, J. & de Rijke, M. (2019). Dialogue generation: From imitation learning to inverse reinforcement learning. AAAI 2019.
- **Li**, **Z.** & de Rijke, M. (2017). The impact of linkage methods in hierarchical clustering for active learning to rank. *SIGIR* 2017, 941–944.
- 9 Li, Z., Kiseleva, J., de Rijke, M. & Grotov, A. (2017). Towards learning reward functions from user interactions. *ICTIR* 2017, 289–292.
- Liu, X., Li, Z., Liu, J., Liu, L. & Zeng, X. (2015). Implementation of arithmetic operations with time-free spiking neural p systems. *IEEE transactions on nanobioscience*, 14(6), 617–624.
- Liu, X., Li, Z., Suo, J., Liu, J. & Min, X. (2015). A uniform solution to integer factorization using time-free spiking neural p system. *Neural Computing and Applications*, 26(5), 1241–1247.
- Liu, X., Suo, J., Li, Z., Zou, Q., Liu, J. & Ju, Y. (2015). Reusable logic gates based on dna strand branch migration. *Journal of Computational and Theoretical Nanoscience*, 12(8), 1624–1629.
- Liu, X., Li, Z., Suo, J., Ju, Y., Liu, J. & Zeng, X. (2014). Solving multidimensional 0-1 knapsack problem with time-free tissue p systems. *Journal of Applied Mathematics*.

#### **Awards and Achievements**

2014 National Scholarship for outstanding Postgraduate students, China

2015 National Scholarship for outstanding Postgraduate students, China

## **Teaching Experience**

TAing Information Retrieval 1 (2018), University of Amsterdam, Netherlands

Supervision Two Master theses (2018), University of Amsterdam, Netherlands

- Title: Cyclists' Route Choice in Amsterdam: Finding Factors of Influence and Predicting Cyclists' Route ChoicE, with Chris Olberts
- Title: How to measure a neighborhood: Exploring geo-spatial data enrichment and neighborhood embeddings for housing price prediction, with Guus Bobeldijk

Two Master theses (2019), University of Amsterdam, Netherlands

- Title: Text Classification for Ground Lease Documents, with Rouel de Romas
- Title: Predicting salary using Job posting data, with Roma Bakhyshov

#### **Academic Activities**

Reviewing Reviewer for CIKM'21, AAAI'21, TOIS, IPM and Information Retrieval Journal Sub-reviewer for ECIR'18, SIGIR'18, CIKM'18, NAACL'19 and SIGIR'19

Summer School European Summer School in Information Retrieval 2017, Barcelona, Spain

# Skills

Tools & Technologies ☐ Numpy, PyTorch, Tensorflow

Coding Python, C, LATEX

## Languages

Professional working proficiency Renglish