

Dake Zhang

PHD STUDENT IN COMPUTER SCIENCE

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Education

Cheriton School of Computer Science, University of Waterloo

Waterloo, Canada

PhD Student in Computer Science

Sep. 2022 - May 2025 (Exp.)

- Supervisor: Prof. Mark D. Smucker
- Research Interests: Information Retrieval, Natural Language Processing
- Courses: Advanced Topics in Computer Systems - Experimental Performance Evaluation

Cheriton School of Computer Science, University of Waterloo

Waterloo, Canada

Master of Mathematics in Computer Science

Sep. 2020 - Aug. 2022

- GPA: 93.75/100
- Supervisor: Prof. Mark D. Smucker
- Thesis: Reducing Health Misinformation in Search Results
- Courses: Introduction to Machine Learning, Fundamentals of Optimization, Advanced Topics in Databases - High Recall Information Retrieval, Advanced Topics in HCI - Educational Technology

School of Computer Science, Wuhan University

Wuhan, China

Bachelor of Engineering in Software Engineering

Sep. 2016 - May 2020

- GPA: 3.85/4.0 (91.38/100)
- Supervisor: Prof. Bo Han
- Thesis: Application of Topological Data Analysis on Word Embeddings
- Core courses: Advanced Mathematics, Linear Algebra, Discrete Mathematics, Probability Theory and Statistics, Database Systems, Compilers, Human-Computer Interaction, Software Engineering

Publications

Reducing Health Misinformation in Search Results

Dake Zhang

UWSpace Theses, 2022

Learning Trustworthy Web Sources to Derive Correct Answers and Reduce Health Misinformation in Search

Dake Zhang, Amir Vakili Tahami, Mustafa Abualsaud, Mark D. Smucker

Proceedings of the 45th International ACM SIGIR Conference on Research and Development in Information Retrieval, 2022

UWaterlooMDS at the TREC 2022 Health Misinformation Track

Amir Vakili Tahami, **Dake Zhang**, Mark D. Smucker

Text REtrieval Conference (TREC), 2022

UWaterlooMDS at the TREC 2021 Health Misinformation Track

Mustafa Abualsaud, Irene Xiangyi Chen, Kamyar Ghajar, Linh Nhi Phan Minh, Mark D. Smucker, Amir Vakili Tahami, **Dake Zhang**

Text REtrieval Conference (TREC), 2021

Experience

Information Retrieval Group & Data Systems Group, University of Waterloo

Waterloo, Canada

Graduate Research Assistant supervised by Prof. Mark D. Smucker

Sep. 2020 - Present

- Helped organize and participated in the TREC (Text REtrieval Conference) Health Misinformation Track (2020-2022).
- Worked on zero-shot stance detection models and trustworthiness estimators to reduce online health misinformation.

Recommender Systems Group of TikTok, ByteDance

Beijing, China

Machine Learning Intern mentored by Keyang Zhang and Xuecheng Yang

May 2020 - Sep. 2020

- Assisted in adjusting the Recommender System to support the launch of Friend Tab.
- Experimented and deployed personalization strategies to promote interactions (e.g., liking, commenting, sharing, etc.) among friends.
- Applied Machine Learning algorithms to predict the intimacy among users, which improved friend interactions per user by 1%.

Big Data Group, Wuhan University

Wuhan, China

Undergraduate Research Assistant supervised by Prof. Bo Han

Mar. 2018 - May 2020

- Undergraduate Thesis: Combined Convolutional Neural Networks and Topological Data Analysis techniques to discover writing styles of different authors for the Authorship Attribution task, which achieved strong performance on long texts.
- Utilized Topological Data Analysis to create an Early Warning System for detecting structural disturbances in the Chinese stock market and predicting possible stock market crashes.

Mitacs Globalink Undergraduate Research Intern supervised by Prof. Carrie Demmans Epp

Jun. 2019 - Sep. 2019

- Improved visualization of student's activities on the online learning platform.
- Developed an extractive summarization model to select summary sentences from posts and replies in the discussion forum.

Honors & Awards

HONORS

2020	Outstanding Graduate , Wuhan University	<i>Wuhan, China</i>
2017, 2018, 2019	Outstanding Student , Wuhan University	<i>Wuhan, China</i>
2017, 2018	Active Participant in Social Activities , Wuhan University	<i>Wuhan, China</i>

AWARDS

2022	Student Travel Grant (350 EUR) , SIGIR 2022	<i>Madrid, Spain</i>
2021	Globalink Graduate Fellowship (15k CAD) , Mitacs	<i>Vancouver, Canada</i>
2019	Globalink Research Internship (5.7k CAD) , China Scholarship Council & Mitacs	<i>China & Canada</i>
2017, 2019	Scholarship for Exemplary Student (1k CNY) , Wuhan University	<i>Wuhan, China</i>
2018	Scholarship for Outstanding Student (2k CNY) , Wuhan University	<i>Wuhan, China</i>

Skills

Programming	Python, Java, R, C, C++, JavaScript, PHP, C#
Tools	Git, PyTorch, Linux
Languages	Chinese (native), English (TOEFL 110/120, GRE 332/340)