Chi Zhao (Vector)

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EDUCATION

Saint Petersburg State University	2021 – 2025 (Expected)
PhD in Applied Mathematics and Control Processes	*Saint Petersburg, Russia*
Saint Petersburg State University	2019 – 2021
M.S. in Applied Mathematics and Informatics (GPA: 4.9/5.0)	*Saint Petersburg, Russia*
Beijing Institute of Technology	Jul. 3 – 28, 2017
ACM Summer Camp	*Beijing, China*
Yanan University	2015 – 2019
B.S. in Computer Science (GPA: 3.1/4.0)	*Yanan, China*

WORKING EXPERIENCE

Huawei Inc.	Sep. 2021 – Present
Researcher	*Saint Petersburg, Russia*
Wisedu Inc.	Sep. 2016 – May. 2019
Software Engineer	*Yanan, China*

PROJECT EXPERIENCE

Russian Science Foundation Grant No. 22-21-00346	2023
Researcher	*Saint Petersburg, Russia*
Fast calculation of massive high dimensional vector similarity	May 2018 – Aug. 2018
Algorithm Engineer	*Yanan, China*

This project improves the efficiency of the nearest neighbor algorithm and won the 3rd prize in the China Software Cup 2018.

Online news classification system based on CNN	Mar. 2018 – May. 2018
Full Stack Engineer	*Yanan, China*

This project has obtained a Chinese software registration certificate and won the 3rd prize in the Computer Design Competition 2018.

PATENT / COPYRIGHT CERTIFICATES

A program for modeling the opinion dynamics in two-layer networks	2023
Russian Computer Software Copyright Registration Certificate	*NO. 2023661532*
Online News Classification System Based on Convolutional Neural Network	2018
Chinese Computer Software Copyright Registration Certificate	*NO. 2018SR502097*

OPEN SOURCE PROJECTS

ShapG | *python · feature importance algorithm · centrality measures*
- A Python package for feature importance algorithms based on Shapley values.
- This package can also be used to calculate the centrality in the graph.

News Classification | *python · NLP · CNN · text classification*
- Online News Classification System Based on Convolutional Neural Network.
- This project was awarded the provincial 3rd prize in the 2018 national computer design competition.

SKILLS

Programming: Python · C/C++ · Go · Matlab/Octave · Julia · R · SQL · LaTeX
ML Libraries: Tensorflow · PyTorch · Keras · Scikit-Learn
Developer Tools: Git · Docker · Google Cloud Platform
OS: Windows · MacOS · Arch Linux
Languages: Chinese (native), and English (fluent)

RESEARCH INTERESTS

Graph Algorithms · Centrality Measures · Machine learning · Explainable Artificial Intelligence · Probability Theory · Statistics
Data Compression · Coding Theory · Time Series Analysis · Optimization · Stochastic Modeling · Stochastic Processes

Selected Publications

1. **Zhao C.**, Parilina E. M. Opinion Dynamics in Two-Layer Networks with Hypocrisy // *Journal of the Operations Research Society of China.* – 2024. – Mar. – Vol. 12, no. 1. – P. 109-132.

2. **Zhao C.**, Parilina E. M. Analysis of consensus time and winning rate in two-layer networks with hypocrisy of different structures // *Vestnik of Saint Petersburg University. Applied Mathematics. Computer Science. Control Processes.* – 2024. – Vol. 20, no. 2. – P. 170-192.

3. **Zhao C.**, Parilina E. M. Network Structure Properties and Opinion Dynamics in Two-Layer Networks with Hypocrisy // *Mathematical Optimization Theory and Operations Research.* – Cham : Springer Nature Switzerland. – 2024. – P. 300-314.

4. **Zhao C.**, Parilina E. M. Consensus time and winning rate based on simulations in two-layer networks with hypocrisy // *2023 7th Scientific School Dynamics of Complex Networks and their Applications (DCNA).* – 2023. – P. 68-71.

5. **Zhao C.**, Parilina E. M. Centrality measures and opinion dynamics in two-layer networks with replica nodes // *arXiv preprint arXiv:2406.18780v2.* – 2024. – 2406.18780v2.

6. **Zhao C.**, Liu J., Parilina E. M. ShapG: new feature importance method based on the Shapley value // *arXiv preprint arXiv:2407.00506.* – 2024. – 2407.00506. (**Accepted by Engineering Applications of Artificial Intelligence**)

Community service

Reviewer for journals and conferences
- Engineering Applications of Artificial Intelligence (EAAI)
- International Conference On Computational Optimization (ICOMP)

Conferences

International Conference On Computational Optimization (ICOMP 2024)	Innopolis, Russia
Visitor	*Oct. 10 - Oct. 12, 2024*
Mathematical Optimization Theory and Operations Research (MOTOR 2024)	Omsk, Russia
Oral Presentation	*June. 30 - July. 06, 2024*
Game Theory and Management (GTM 2024)	Saint-Petersburg, Russia
Oral Presentation	*June. 28 - 30, 2023*
Game Theory and Management (GTM 2023)	Saint-Petersburg, Russia
Oral Presentation	*June. 28 - 30, 2023*
Control Processes and Stability 2022	Saint-Petersburg, Russia
Oral Presentation	*Apr. 4 - 8, 2022*
Control Processes and Stability 2021	Saint-Petersburg, Russia
Oral Presentation	*Apr. 5 - 9, 2021*
The Computing Conference 2017	Hangzhou, China
Visitor	*Oct. 11 - 14, 2017*
Yiban Developer Conference 2017	Shanghai, China
Developer	*Aug. 2017*
Language & Intelligence Summit 2017	Beijing, China
Visitor	*July 23, 2017*

Teaching

Applied Statistics in R	Saint-Petersburg, Russia
Teaching assistant	*2024*
Statistical Decisions and Econometrics	Saint-Petersburg, Russia
Teaching assistant	*2022*

Honours & Awards

Name	Placing	Scope	Awarder	Year
Diploma with distinction	-	University	Saint Petersburg State University	Jun. 2021
Excellent Graduation Thesis (Design)	-	University	Yanan University	Jun. 2019
Excellent Graduate	-	University	Yanan University	Jun. 2019
Merit Student Scholarship	-	University	Yanan University	Dec. 2018
China Software Cup Competition	3rd	China	China Software Cup Organizing Committee	Oct. 2018
Computer Design Competition	3rd	Northwest China	Northwest University (China)	May. 2018
Mathematical Contest in Modeling	2nd	Shaanxi	China Society for Industrial and Applied Mathematics	Dec. 2017
Mathematics Competition	3rd	Shaanxi	Chinese Mathematical Society	Nov. 2016