

Jiawei Chen

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Education

Old Dominion University, Virginia, USA Jan. 2023 – Present
Ph.D. Candidate in Computer Science

- Advisor: Dr. Rui Ning
- GPA: 4.0/4.0
- Research Interests: Practical Graph Backdoor in Real-World, Security of Graph-Related LLMs

Northeastern University, Shenyang, China Sep. 2019 – Jul. 2022
M.S. in Computer Science and Technology

- Advisor: Dr. Lan Shi & Dr. Yuhai Zhao
- GPA: 3.21/4.0
- Specialization: Graph Learning, Anomaly Detection, Imbalanced Learning
- Thesis: Detection of Cryptocurrency Phishing Fraud Based on Graph Feature Learning

Tibet University, Tibet, China Sep. 2015 – Jul. 2019
B.S. in Computer Science and Technology

- Advisor: Prof. Sonam Gyatso
- Ranking: 3/40 (Top 10%)
- Specialization: Tibetan Natural Language Processing, VR Panorama
- Thesis: Research and Implementation of Tibetan Function Word Proofreading Algorithm

PUBLICATIONS

J. Chen, L. Li, D. Takabi, M. Sosonkina, R. Ning, “Heterogeneous Graph Backdoor Attack”, arXiv preprint arXiv:2506.00191.

J. Chen, Y. Yin, Y. Zhao, L. Shi, “Ether Phishing Account Detection Device and Method Based on Multi-Feature Learning”, China Patent (CN114782051B, Granted: March 14, 2025).

X. Wang, H. Lv, **J. Chen**, “AGST-LSTM: The ConvLSTM Model Combines Attention and Gate Structure for Spatiotemporal Sequence Prediction”, in *Chinese Conference on Pattern Recognition and Computer Vision (PRCV)*, Springer, 2023.

S. Jiancuo, **J. Chen**, “Research and Implementation of Tibetan Function Word Proofreading Algorithm Using Python”, in *Computer Era*, 2019(9), pp. 13–15.

S. Jiancuo, **J. Chen**, “Making Method and Application of Campus VR Panorama Based on Pano2VR”, in *Computer Era*, 2018(11), pp. 70–72.

PROJECTS

Exploring Security of Heterogeneous Graph Neural Networks 2023 – 2025

- The **first** systematic investigation of the effect of existing graph backdoor attacks on heterogeneous graphs.
- Proposed Heterogeneous Graph Backdoor Attack (HGBA), the **first** backdoor attack on HGNNs.

Exploring Security of Large Language Models 2023 – 2024

- Conducted an in-depth investigation into backdoor attacks targeting LLMs.

Generate network traffic data using Large Language Models. 2023 – 2024

- Evaluated the feasibility of LLMs in generating realistic network traffic data.
- Utilized specific datasets to fine-tune LLMs (e.g., Llama 3) for network traffic data generation.
- Validated the quality and realism of the generated network traffic data.

Detect Cryptocurrency Phishing Fraud	2021 – 2022
<ul style="list-style-type: none"> Proposed a multi-feature learning method to detect Ethereum phishing fraud account. Made full use of effective information in the Ethereum phishing scam network to improve classification effect. Eliminated the impact of the class imbalance in the Ethereum phishing scam network on classification results. 	
Develop a Tibetan text duplicate checking software demo (Copyright: 2019SR0626706)	Jan. 2018 – May 2019
<ul style="list-style-type: none"> Implemented a dictionary-based inverse maximum matching algorithm for word segmentation. Calculated sentence similarity using cosine similarity. Developed front-end with VB6.0 and managed back-end with SQL database. 	
National Undergraduate Innovation and Entrepreneurship Training Program Role: PI (Code:201710694035, \$1,300)	Oct. 2017 – Oct. 2018
<ul style="list-style-type: none"> Created a VR panorama of Tibet University's campus. 	

TEACHING & MENTORING

Teaching Assistant (TA)

• T3-CIDERS Program (NSF-Funded)	Sep. 2023 – Aug. 2025
• DeapSECURE Program (NSF-Funded)	Jun. 2023 – Sep. 2023
• Communication Principles	Spring 2022
• Principles of Modern Switching	Spring 2022
• C++ Program Designing	Spring 2022
• Introduction of Computer	Fall 2018

Mentoring Experience

- Provided guidance to Miao Lin (ODU, Ph.D., 2023) regarding backdoor attacks on imbalanced datasets.
- Provided guidance to Zemin Chen (ODU, Ph.D., 2024) on fine-tuning with imbalanced datasets for backdoor attack defense.

WORK EXPERIENCE

Research Assistant , Old Dominion University	Jan. 2023 – Present
Programming Teacher & STEM Tutor , Education Training School, China	Aug. 2022 – Nov. 2023
New Media Intern , Tibet ByteDance Information Technology Co., Ltd., China	Jul. 2018 – May 2019

Awards & Honors

• First-Class Academic Scholarship, Northeastern University	Sept. 2019
• Outstanding Graduate Award, Tibet University	May 2019
• Chinese Modern Scientist Scholarship (1st Place)	Dec. 2018
• Second-Class Merit Scholarship, Tibet University	Oct. 2017

SKILLS

Developer Tools: Linux, Slurm, Docker, VS Code, Git, GitLab, SSH, Jupyter

Programming Languages: Python, C, C++, Java, Visual Basic 6.0, C#, R, HTML, CSS, JavaScript, MATLAB, SQL

ML & DL Frameworks: PyTorch, TensorFlow, Keras, Transformers

Specialized Libraries: Scikit-learn, imbalanced-learn, PyTorch Geometric, Deep Graph Library, Pandas, NumPy, Matplotlib

Languages: Mandarin–Native, English–Fluent, Tibetan–Beginner