

Bo Ni

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EDUCATION

Vanderbilt University, Nashville, Tennessee, USA

- Ph.D in Computer Science Dec 2023 – Present
 - Advisor: Dr. Tyler Derr
 - Research Areas: Information Retrieval, Knowledge Enhanced Language Models, Trustworthy AI, AI Safety

University of Notre Dame, Notre Dame, Indiana, USA

- B.S in Mathematics and Computing Aug 2017 – May 2021
 - Advisor: Dr. Meng Jiang
 - Research Area: Graph Machine Learning, Anomaly Detection, Behavioral Modelling
 - Graduated with *cum laude*.
 - Dean's List All Semester
 - Cumulative GPA: 3.93 / 4.00; Major GPA: 3.97 / 4.00

RESEARCH EXPERIENCE

Network and Data Science Lab, Vanderbilt University

- Graduate Research Assistant. Dec 2023 – Present
 - Advisor: Dr. Tyler Derr
 - Focus: Knowledge Enhanced Language Models, Trustworthy AI, Retrieval Augmented Generation, AI Safety, Temporal Network Modelling, LLM Reasoning and Planning

Lab of Data Mining and Decision Making (DM²), University of Notre Dame

- Undergraduate Research Assistant. Aug 2019 – May 2021
 - Advisor: Prof. Meng Jiang
 - Focus: Graph Machine Learning, Text Analysis, Social Network Analysis, Fraud Detection

Laboratory of Medical Imaging and Computation, Harvard Medical School

- Research Assistant. May 2019 – Jul 2019
 - Advisor: Dr. Synho Do
 - Focus: Medical Image Analysis on Chest X-Ray

Social Sensing Lab, University of Notre Dame

- Undergraduate Research Assistant. Aug 2018 – May 2019
 - Advisor: Prof. Dong Wang
 - Focus: Image-based Text Generation

INDUSTRY EXPERIENCE

Amazon Athena, Amazon Web Service

- Software Development Engineer Sep 2021 – Dec 2023
 - Selected Projects: API Support for Athena's Parameterized Query; Native Support for Athena's Fine Grained Access Control; Error Framework Improvements for Athena's DDL Queries.

The Jarvis Lab, Tencent

- Data Analyst Jun 2018 – Jul 2018
 - Project: Representation Learning from Medical Text Data. Extracted smoking habits from over 10000 patients' self reports and achieved a final 0.92 AUC with ensemble methods in lung disease prediction.
 - Focus: Natural Language Processing, Representation Learning, Machine Learning in Medical Application.

PUBLICATIONS

CONFERENCES

- [C3] B. Ni, T. Zhao, W. Yu, M. Jiang. "Action Sequence Augmentation for Early Graph-based Anomaly Detection" in *ACM International Conference on Information and Knowledge Management (CIKM)*, Nov 2021.
- [C2] B. Ni, T. Zhao, W. Yu, M. Jiang. "Early Fraud Detection with Augmented Graph Learning" in *Spotlight Presentation at the Second International Workshop on Deep Learning on Graphs (DLG-KDD '21)*, Aug 2020.
- [C1] DY. Zhang, B. Ni, Q. Zhi, T. Plummer, Q. Li, H. Zeng, Q. Zeng, Y. Zhang, D. Wang "Through The Eyes of A Poet: Classical Poetry Recommendation with Visual Input on Social Media" in *Advances in Social Analysis and Mining (ASONAM '19)*, Aug 2019.

SUBMITTED PAPERS (UNDER REVIEW)

- [S1] Bo Ni, Yu Wang, Tyler Derr “Towards Trustworthy Knowledge Graph Reasoning: An Uncertainty Aware Perspective” in submission to *Empirical Methods in Natural Language Processing (EMNLP '24)*, May 2024.
- [S2] Yu Wang, Nedim Lipka, Ruiyi Zhang, Alexa Siu, Yuying Zhao, Bo Ni, Xin Wang, Ryan Rossi, Tyler Derr “Augmenting Textual Generation via Topology Aware Retrieval” in submission to *The Conference on Information and Knowledge Management (CIKM '24)*, May 2024.

PREPRINTS

- [P1] B. Ni, Z. Guo, J. Li, M. Jiang. “Improving Generalizability of Fake News Detection Methods using Propensity Score Matching” *Preprint*, Dec 2019.

AWARDS & SCHOLARSHIPS

- Dean’s List, All Semester, University of Notre Dame 2017 – 2021
For attaining a semester GPA of at least 3.8.
- Honorable Mention, CRA Outstanding Undergraduate Research Award Dec 2020
Awards undergraduate students in North American universities who show outstanding research potential in an area of computing research.
- ASA DataFest, Best External Source Prize, \$1000 Apr 2019
Awarded for our project in sports data analysis.
- Whitman Family Fellowship, Notre Dame Career Center, \$4000 Apr 2019
- Liu Institute for Asian Studies Summer Fellowship, Notre Dame Career Center, \$1000 May 2018

CAMPUS ACTIVITIES

- CS For Good**, University of Notre Dame Aug 2018 – May 2019
 - Project Leader
 - Catholic Social Teaching Project
 - Worked with Prof. Sedmak to create a data base that would host his student’s reflections.
 - Volunteer
 - South Bend Code School
 - Taught technical skills to school-aged kids from traditionally under-represented background in tech community.

PROFESSIONAL SERVICE

- Conference Reviewer**
 - KDD 24’
 - WSDM 24’
 - WWW 24’
 - CIKM 21’
 - KDD 20’ KDD 21’
 - WSDM 20’
- Journal Reviewer**
 - TKDD

LANGUAGES

- English: Professional.
 - TOEFL 116/120 (Reading: 30, Listening 30, Speaking 26, Writing 30)
- Chinese: Native Language.
- Japanese: Intermediate (reading); basic (speaking, writing).

[Bo Ni’s Curriculum Vitae updated on 2024-05-31]