boni.bnni@gmail.com   **BO NI**   (574)340-6550

420 Pontius Ave N 531, Seattle, WA, 98109

EDUCATION

University of Notre Dame   *August 2017 - May 2021*
Bachelor of Science in Mathematics and Computing   Overall GPA: 3.93 / 4.0; *cum laude*
Second Major: Economics   Dean's List All Semester; Phi Beta Kappa

HONORS

Honorable Mention for CRA Outstanding Undergraduate Research Award	*2021*
ASA DataFest Best External Source Prize $1000	*2019*
Center for Career Development Whitman Family Fellowship $4000	*2019*
Liu Institute for Asian Studies Summer Fellowship $1000	*2018*

RESEARCH EXPERIENCE

University of Notre Dame Lab of Data Mining and Decision Making (DM2)   *August 2019 - August 2021*
Advisor: Dr. Meng Jiang   *Notre Dame, IN*

- **Early Fraud Detection in Social Networks:** Designed a novel fraud detection framework to enhance early stage fraud detection performance in social networks by capturing the behavior patterns of network participants; Implemented the end-to-end framework and evaluated our methods on large scale real-world data.
- **Fake News Detection with Propensity Score Matching:** Improved cross-topic fake news detection performance by eliminating the confounding bias with Propensity Score Matching based feature extraction; Evaluated the proposed method on real-world political and celebrity news datasets.

University of Notre Dame Social Sensing Lab   *August 2018 - May 2019*
Advisor: Dr. Dong Wang   *Notre Dame, IN*

- **Image-based Poetry Recommendation:** Designed a framework for image-based poetry recommendation that takes implicit artistic conception into consideration; Built datasets and implemented baselines for the proposed framework.

Mobile Computing Lab, University of Notre Dame   *September 2018 - May 2019*
Advisor: Christian Poellabauer   *Notre Dame, IN*

- **Purple Martin App:** Developed a mobile app with Ionic and React for the Purple Martin Conservation Association that will cover 3k to 4k participants a year. Functions of the app include report submission and news updates.
- Held weekly meetings with Prof.Pollabeur and other team members; communicated needs and updates on a monthly-basis with the CEO of the organization.

WORK EXPERIENCE

Athena, Amazon Web Service   *September 2021 - Present*
Software Development Engineer   *Seattle, WA*

- **Parameterized Query:** Designed and implemented Athena parameterized query's API support that has reached to all of Athena's customers. The adoption rate of Athena's parameterized query has since increased 55%.
- **Operational Excellency:** Streamlined the current deployment flow including integration tests with Amazon pipelines; Improved Athena's error package and reduced overall DDL system errors by 25%.

The Jarvis Lab, Tencent   *June 2018 - July 2018*
Data Analyst   *Shenzhen, China*

- Extracted smoking habits from over 10000 patients' self reports using snowNLP, a Chinese word segmentation tool, and analyzed the data with Latent Dirichlet Allocation to extract semantic topics.
- Experimented different machine learning algorithms with the extracted features; achieved a final 0.92 AUC with ensemble methods in lung disease prediction.

PUBLICATIONS

- **Bo Ni**, Tong Zhao, Wenhao Yu, Meng Jiang. "Action Sequence Augmentation for Early Graph-based Anomaly Detection ". ACM International Conference on Information and Knowledge Management (CIKM), 2021.
- **Bo Ni**, Tong Zhao, Wenhao Yu, Meng Jiang. "Early Fraud Detection with Augmented Graph Learning". Accepted as spotlight presentation by the Second International Workshop on Deep Learning on Graphs (DLG-KDD'20).
- Daniel Yue Zhang, **Bo Ni**, Qiyu Zhi, Thomas Plummer, Qi Li, Hao Zheng, Qingkai Zeng, Yang Zhang, Dong Wang. "Through The Eyes of A Poet: Classical Poetry Recommendation with Visual Input on Social Media." Advances in Social Analysis and Mining(ASONAM '19) (Oral).
- **Bo Ni**, ZhiChun Guo, Jianing Li, Meng Jiang. "Improving Generalizability of Fake News Detection Methods using Propensity Score Matching" arxiv 2002.00838 (2020).

EXTRA-CIRRUCULAR

- Volunteer - South Bend Homeless Center, Shenzhen Concert Hall
- Shenzhen U20 Paid Soccer Player - Shenzhen Football Association