Shuo Han

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SUMMARY

- 4+ years' experience in software development, web development, and application development.
- Possess a strong foundation in statistics, mathematics, and programming. Highly passionate about machine learning, encompassing both theoretical foundations and practical applications, particularly in the realms of AI for security and graph machine learning; and committed to advancing data mining techniques.

EDUCATION

Northwestern University   **Master's Degree, Statistics & Data Science**
09/2022 – Present

Boston University   **Bachelor's Degree, Computer Science & Statistics**
09/2019 – 08/2022

RESEARCH EXPERIENCE

University of New South Wales   **Research Assistant**
U.S. | 05/2024 – Present

- Topic on LLM for security

Northwestern University   **Research Assistant**
U.S. | 12/2023 – 05/2024

- Submitted to NeurIPS 2024: To address the challenge of toxicity detection in human-LLM interactions, we conducted a research based on variations in perceived toxicity. We got multi-source labelers and employed advanced machine learning techniques to aggregate these labels. Our method outperforms all existing approaches, providing a robust solution to toxicity detection in the context of human-LLM interactions.

Northwestern University   **Thesis on GNN**
U.S. | 07/2023 – Present

- Sparse U.S. water quality data hampers goal assessment and modeling. Traditional methods lack real-time upstream-downstream synchronization. We propose a GNN for enhanced data resolution, considering river network connections and spatiotemporal inputs, and explore transfer learning across other U.S. watersheds using the GNN data imputation framework.

Publication

A Botnet Data Collection Method for Industrial Internet.   ICCWAMTIP 2023
Jian Shu, Bo Xian, Chenli Wang, Jiazhong Lu, Yuanyuan Huang, Shuo Han

MC-GAN: An Adversarial Sample Defense Algorithm.   ICCWAMTIP 2023
Chenli Wang, Juyang Wu, Xing Yang, Junfei Wang, Jian Shu, Jiazhong Lu, Yuanyuan Huang, Shuo Han

WORK EXPERIENCE

CITIC Securities Company Limited   **Investment Banking Analyst Internship**
China | 06/2023 – 08/2023

- Participated in an IPO project for a technology innovation board, conducted sampling verification and inventory of the issuer's assets, completed the verification of the company's account statement and peripheral account statement, and assisted in completing supplier interviews.
- Assisted Rongda with walk-through and cut-off testing; managed data collection and production for sales and R&D expenses.

Northwestern University   **Teaching Assistant**
U.S. | 01/2023 – 06/2023

- Led student groups in data science projects, provided expert advice, and clarified their queries.

- Held weekly office hours, collaborated regularly with professors and lecturers, and supported their instructional efforts.

Boston University Chinese Students and Scholars Association   Manager of Tech. Dept.

U.S. | 09/2021 – 12/2021
- Led a team of over 50 members in developing the official BUCSSA website and its WeChat Mini Program, ensuring real-time performance optimization during usage, Collaborated with over 20 local companies to secure internship opportunities for STEM students.
- Coordinate departmental operations and collaborate with other departments to advance the association's growth.

Goertek (Chinese Leading Acoustic Components Company)   Software Devp. Internship

China | 06/2021 – 08/2021
- Responsible for internal coding development and unit testing of specific functions according to the software design specification and wrote relevant documents.
- Integrated algorithms into system software and optimized corresponding modules.

Dongfang Electronics Corporation (DFE）   R&D Engineer Internship

China | 12/2020 – 01/2021
- Read papers on Neural Architecture Search (NAS) and repeated the methods.
- Participated in the function modules development of the IoT product core data platform.

Sinolink Securities Company Limited   Industry Researcher Internship

China | 06/2020 – 08/2020
- Assisted in preparing industry research reports for multiple internet media companies to analyze stock and industry trends.
- Utilized web scraping tools to extract financial data, including revenue and cash flow, for company valuation, sourcing information from platforms such as Bloomberg, Capital IQ, and Wind.

ICBC (Industrial and Commercial Bank of China) Credit Suisse Asset Management   Data Analyst

China | 12/2019 – 01/2020
- Used Python to crawl the sales data of financial products, process and visualize the data, thus providing quantitative basis for marketing strategy optimization.
- Completed training in personal wealth management, foreign currency investment, national debt, insurance, and stock and fund strategies.

PROFESSIONAL SKILLS

- Machine Learning | Security Information & Event Management (SIEM) | NLP | Secure Software Development | Problem-solving | Teamwork | Good Communication Skills | Google Analytics 4 | Critical thinking
- Python | Java | C | R | SQL | CSS | HTML | Java Script | OCaml