

Shuhan Gu

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EDUCATION BACKGROUND

Boston University

MA, US

Bachelor of Arts candidate in Computer Science (Minor: Statistics)

Sept. 2020- May 2024

- **Overall GPA:** 3.74/4.0 **Honors:** Dean's List in Spring 2021, Fall 2021, Spring 2022, and Spring 2023
- **Skills:** Python, Java, C, OCaml, JavaScript, React.js, SQL, MongoDB, Computer Network, Pandas, Neutral Network

WORK EXPERIENCE

Cambricon

Beijing, China

Frontend Website Engineer

Jun. 2023 – Aug. 2023

- Self-taught JavaScript in two weeks, using JavaScript to code a website to visualize certain Python files
- Gained valuable insights on React and React Flow and successfully integrated React into a web page;
- Took charge of the whole front-end process, including font, layout, picture styles, and so on;
- Published the website on GitHub for more publicity.

InHope Pictures

Beijing, China

Video Producer Intern

Jun. 2021 – Aug. 2021

- Developed and filmed video content relating to food and restaurant reviews and completed post-production;
- Uploaded videos to various video websites and helped the company to boost publicity.

PROFESSIONAL EXPERIENCE

CASP lab, Boston University

Sept. 2023 – Present

Supervisor: Assistant Professor Vasiliki Kalavri, Computer Science department, Boston University

- Transform the landscape of Graph Neural Networks (GNNs) by introducing modern storage APIs to train GNN models efficiently on exceptionally large graphs while simultaneously addressing the time bottleneck inherent in traditional sampling algorithms;
- By optimizing and minimizing the repetitive read and write operations between memory and disk, to open the door to groundbreaking applications across diverse domains.

Identifying Network Connection: Benign vs. DoS Attack - A Comparative Analysis of Binary Classifiers

Independent Research Supervisor: Prof. Alex Rogers, University of Oxford

Jun. 2023 – Aug. 2023

- Gained insight into Bayesian probability, as well as various Binary classifiers and ROC curve;
- Delved into the efficacy of various binary classifiers in effectively distinguishing normal network connections from instances of 'DoS Attacks.';
- Identified the classifier that exhibits the highest level of effectiveness, enhancing the overall security posture of your network infrastructure.
- **Shuhan Gu**, independent author, *Identifying Network Connection: Benign vs. DoS Attack - A Comparative Analysis of Binary Classifiers* was accepted by International Conference on Machine Learning and Automation (CONF-MLA 2023) on Aug. 21, 2023.

Chess AI Project, Boston University

Jan. 2023 – May. 2023

- Used Java to construct heuristic function of chess AI in a team of two by reading chess rules as well as chess algorithms, finally beat 90% of teams in the final tournament;
- Designed an agent by applying minimax algorithm to make decisions and make better predictions for optimistic move.

Battle Field AI Project, Boston University

Jan. 2023 – May. 2023

- Applied Java Sepia package to build Neural Network Architecture by implementing convolutional neural network algorithm to agent;
- Designed feature vectors as input for building Neural Network Architecture;
- Responsible for gradient tuning to find the optimum step size for model, tuned parameters by repeating bootstrapping, and picked the most well-performed agent for final combat upon performance combats among agents.

Mentor, Boston University Academy FIRST Robotics Team, "Overcooked"

Sept. 2021 – Present

- Recommended coping mechanisms, offered guidance to individualized support, and oversaw robotics building and robotics testing with a group of 15 high school students.