

# JOHNSON YANG

johnsony@bu.edu | 718-415-5344 | Brooklyn, NY  
[linkedin.com/in/johnson-yang-b0303b205/](https://www.linkedin.com/in/johnson-yang-b0303b205/) | [github.com/johnsony0](https://github.com/johnsony0)

## EDUCATION

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**Boston University, College of Engineering** Boston, MA  
B.S, Computer Engineering - Concentration in Machine Learning May 2024  
Dean's List, Cum Laude  
Relevant Coursework: Software Engineering, Algorithms & Data Structures, Probability/Statistics, Machine Learning, Operating Systems, Deep Learning, Reinforcement Learning, Cloud Computing, Computer Networking

## PROJECTS

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**League of Legends Draft Predictor - Python, Postgresql, React** July 2024

- Developed a PostgreSQL database using the Riot API to gather and store game data.
- Implemented champion encoding and built predictive models using PyTorch and scikit-learn.
- Created a responsive React frontend, allowing users to select champions and receive game outcome predictions.

**Stock Predictor - Python** June 2024

- Engineered a ML model with PyTorch to forecast stock prices and trends with high accuracy.
- Leveraged NumPy and pandas for robust data processing and Matplotlib for insightful data visualizations
- Utilized seven years of historical stock data via the Alpaca API for comprehensive model training and testing
- Achieved predictions within 5% accuracy of the actual stock values

**PySuperTuxKart AI Driving - Python** Nov 2023 - Dec 2023

- Engineered an AI-powered virtual go-kart outperforming humans on most simulated maps, built with PyTorch
- Trained the AI by feeding tens of thousands of image data into a convolutional neural network
- Supervised development, training, and testing of convolutional model, accomplished decreasing loss rate by 72%, from 0.071 to 0.02

## EXPERIENCE

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**Boston University Mentorship** Boston, MA  
Software Engineer Sep 2023 - Dec 2023

- Analyzed historical data on vulnerabilities identified within hundreds of Kubernetes SBOMs, accessible through a CLI or bar graph visualizations
- Consolidated thousands of vulnerability data, including names, installed and fixed versions, CVE codes, and severity levels, into a Neo4J database for enhanced analysis and tracking
- Directed development of a CLI tool to access data in depth

**Boston University Engineering Department** Boston, MA  
Lab Assistant Oct 2022 - May 2023

- Monitored over a hundred lab computers, ensuring software is up to date, and guaranteeing functionality and efficiency for hundreds of students to use in a college environment
- Functioned in a team of 4 to catalog, sort, and deploy over 200 devices (e.g.: oscilloscopes, waveform generators, multimeters, monitors, computers, etc.) for college courses
- Performed maintenance on both Windows and Linux OS computers used by over a dozen classes

## SKILLS

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**Programming:** C/C++, Matlab, Verilog, Python, JavaScript  
**Other Tools & Frameworks:** Git, Linux/Unix, PyTorch, NumPy, React, Firebase, MongoDB, FastAPI, Neo4J,  
**Languages:** Chinese (intermediate)