

JOHNSON YANG

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EDUCATION

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

Langolio - React, Python, MongoDB

Sep 2023 - May 2024

- Developed a scalable web application to facilitate remote language exchange in a classroom environment with support for dozens of countries
- Built using a React frontend, a Python backend with FastAPI, and MongoDB database. Other tools include OpenAI for an AI user, Google and JWT authentication, Stripe for processing payments
- Led implementation of dozens of language options, comprehensive data visualizations and user account modifications

Evolution of Kubernetes - Python, Neo4J

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

PySuperTuxKart AI Driving - Python, Pytorch

Nov 2023 - Dec 2023

- Engineered an AI-powered virtual go-kart outperforming humans on most simulated maps, boasting a training loss as low as 0.02
- 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

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

Programming: C/C++, Matlab, Verilog, Python, JavaScript

Other Tools & Frameworks: Logic Design, Git, Linux/Unix, FPGA programming, PyTorch, React, Firebase, MongoDB, FastAPI, Neo4J

Languages: Chinese (intermediate)