Nathaniel Sawant

609-433-8636 | sawant.na@northeastern.edu | swnt.io | linkedin.com/in/natesawant | github.com/natesawant

EDUCATION

Northeastern University, Khoury College of Computer Sciences — Boston, MA
Bachelor of Science in Computer Science, Concentration in Artificial Intelligence — *Sep. 2021 – May 2025*
GPA: 3.69/4.00
Leadership: Northeastern University IEEE Chapter (President, *Fall 2023*)
Clubs: NUIEEE (Professional), NUHOC (Outdoors), NUPiC (Photography), Generate (Product Development)
Relevant Courses: Database Management Systems, Machine Learning 1, Digital Design, Object-Oriented Design, Algorithms & Data, Programming with C++, Artificial Intelligence, Probability & Statistics

TECHNICAL SKILLS

Languages: Go, Java, Python, C, C++, SQL (Oracle, SQLite), Java/TypeScript, HTML/CSS
Frameworks: React, Tailwind, JUnit, FastAPI, Express
Developer Tools: Git, Docker, AWS, GCP, NoSQL (MongoDB), VS Code, Visual Studio
Libraries: OpenCV, pandas, NumPy, Matplotlib, Scikit-learn, Seaborn

PROFESSIONAL EXPERIENCE

Software Engineer — Jan. 2023 – Jun. 2023
Fidelity Investments — *Boston, MA*
- Developed tool for rapid prototyping using company code with VSCode/Jupyter Lab integration.
- Leveraged the ETL process to extract/save dozens of data points for 65,000 items from multiple sites.
- Built Tableau dashboard to help visualize how 100+ databases are used when, how and by whom.
- Integrated frontend with backend API powered by HuggingFace NLP transformer for <2 second searches.

Research Assistant — Oct. 2021 – Aug. 2022
Rehabilitation Games & Extended Reality Lab — *Boston, MA*
- Assisted in design of database for data collection of participants' eye-tracking captured at 100Hz.
- Implemented multiplayer gameplay mechanics using Unity 3D engine, OpenXR, and Photon Unity Networking.

EXTRACURRICULAR EXPERIENCE

Software Engineer — Sep. 2023 – Present
Generate Product Development at Northeastern University — *Boston, MA*
- Designed REST APIs using MongoDB, Go, and the Echo web framework along with unit tests.
- Implemented user registration frontend with React, React Hook Form, and Tailwind
- Deployed microservice on AWS to estimate price of 3D print using modified open-source slicer.

PROJECTS

Traffic Signal Detection | *OpenCV, Python, C++* — Nov. 2022
- Trained Haar Cascade classifier to detect traffic signal and current color of the light.
- Integrated computer vision model with simple robotic car to obey traffic signal rules.

Reinforcement Learning Agent | *PyTorch, Unity, C#* — Mar. 2023
- Trained and tested reinforcement learning agent that seeks target in unknown environment.
- Integrated model with Unity for training and testing in virtual environment.

Brand Presence Tool | *Azure Cognitive Services, OpenCV, Python, Git* — Jul. 2022
- Created analytics tool to detect brand presence in sponsored videos to measure brand metrics.
- Developed as a prototype for Disrupt's Finnovate startup program, winning first place.

Image Manipulation Program | *Java, Swing Framework, Git* — Jun. 2022
- Coded command line and graphical user interface for kernel-based image manipulation software.
- Performed extensive testing with JUnit for validation/reliability and made Javadocs documentation.