Owen Mariani

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EDUCATION

Boston University | Boston, MA Expected Fall 2025
B.A. in Computer Science GPA: 3.78/4.0
Coursework: Algorithms, Data Structures, Networks, Streaming and Event-driven Systems, Cybersecurity, Systems I, Systems II, Functional Programming, Tech Startups, Linear Algebra, Object Oriented Programming, Web Development

SKILLS AND AWARDS

Languages: Python, Java, TypeScript, Swift, SQL, C, HTML, JavaScript, CSS, OCaml, Terraform, PySpark, C++
Frameworks/DBs: Kafka, Next.js, React.js, Node.js, Angular, Flask, AWS, PostgreSQL, MongoDB, Databricks, Snowflake
Tools/Skills: Flink, Git, Docker, Unix, Jira, Kanban, Slack, Figma, Google Drive, Excel, Confluence, Vim, AGILE, CI/CD
Awards: Eagle Scout, Black Belt, Boston University Dean's List (5x)

EXPERIENCE

Cybersecurity Teaching Assistant December 2024 - Current
CS598 | Boston University
- Launched VMs with AWS LightSail + DigitalOcean and Containers with Docker to act as nodes for use in VPC
- Created lessons and taught VPNs and various technologies like Tailscale, Twingate, Veracode, JumpCloud, and others

Software Engineering Intern May 2024 - Current
Spark! | Boston University
- Architected and built BU Community Service portal with Next.js + PostgreSQL, containerized with Docker, deployed with CI/CD, **serving 17k students** and automating work for admins while aggregating data
- Optimized data integration and relevance of the Boston Police Index using advanced SQL queries, GraphQL, and Railway for seamless multi-table connectivity and enabled user feedback with reCAPTCHA and Github APIs
- Visualized data into interactive filterable histograms and stacked bar charts on officer profiles with Chart.js

Software Engineering Intern March 2024 - April 2024
Humphrey Fellows | Boston University
- Developed full-stack financial management web app using React.js + MongoDB with interactive dashboard, and functionality to support downloading records as excel sheets, allowed client to apply for $5000 of grant funding
- Created REST API endpoints to NoSQL DB to handle complex interactions + streamline accounting processes

Machine Learning Intern June 2023 - August 2023
AtScale | Boston, MA
- Built Snowflake Snowpark™ solution for **Fortune 100 financial services customer** to reduce data movement and compute cost using SQL and PySpark and created comprehensive unit tests for AtScale AI-Link
- Refactored AtScale AI-Link codebase, enhancing API accessibility/consistency to improve customer experience
- Developed Snowflake Snowpark™ and Databricks ML demos on AtScale to support R&D and sales teams

TECHNICAL PROJECTS

Springbreakr
Cloudflare, Python, Next.js, MySQL | *https://github.com/owenm-26/springbreakr*
- Awarded **Best AI Application Built with Cloudflare at BostonHacks 2024** by Major League Hacking (MLH)
- Developed web app that streamlines trip planning for college students, using Cloudflare Workers AI to gamify the process; integrates Google Search and OpenStreetMap APIs for real-time image fetching and destination mapping
- Created a collaborative itinerary feature allowing friends to vote on trip destinations; user preferences are anonymized and analyzed with K-Nearest Neighbors (KNN) to identify trends, enabling ethical data sales

Course Genie
Angular, PostgreSQL, Python, Selenium, OR-Tools | *https://github.com/owenm-26/course-genie*
- Implemented algorithm in Python using Google OR-Tools that prescribes students the optimal course schedule to maximize their Gen-Ed requirements, accounting for limitation such as time conflicts and prerequisites
- Automated scraping of currently available courses from BU Course Search using Selenium, then efficiently storing only necessary fields in various database tables in PostgreSQL using SQLAlchemy ORM

Easy-PT
Next.js, MySQL, Python, Vercel | *https://github.com/owenm-26/Easy-PT*
- Led backend development, implementing robust CRUD operations and integrating a custom-built classification algorithm to provide real-time exercise feedback for users on their physical therapy exercise forms
- Engineered seamless WebSocket streaming, ensuring low-latency communication between frontend and backend