Sean McGuire

(617) 906-1625 | seanrmcguiremusic@gmail.com | linkedin.com/in/sean-mcguire-310024201 | seanrmcguire.com

RELEVANT EXPERIENCE

Wayfair LLC.   Boston, MA
Software Engineer, Supply Chain & Retail Tech   *June 2024 – Present*
- Led the department-wide adoption of Postgres by enhancing Terraform infrastructure for easy db creation and IAM provisioning. Integrated Postgres into a data access library, streamlining adoption for 5+ teams
- Reduced latencies of a key storefront API by 8% by leveraging parallelization & enhancing kafka data propagation to enable the obsoletion and removal of 6,000 lines of SQL queries and surrounding code
- Optimized Kafka consumer applications processing 500k+ messages per second, improving data integrity, eliminating bottlenecks, and enhancing concurrency to ensure real-time processing at scale
- Architected a Kafka pipeline that prevented 63M+ legally non-compliant products from being sold by filtering violating SKUs from real-time product availability data
- Corrected the legal compliance of 300+ suppliers by identifying and resolving a bug impacting export restrictions
- Led preparation efforts for peak sales events by scaling resources and caches, and load-testing storefront services

Software Engineering Co-Op, Marketing Tech   *July 2022 – Dec. 2022*
- Improved the quality of ads displayed on the storefront with a new Java advertisement ranking algorithm
- Optimized our ad footprint and enhanced the shopping experience by implementing logic to scale ad quantities
- Corrected the cost of 650,000+ daily ad clicks by discovering and resolving a bug in an ad pricing algorithm
- Led an initiative for two teams upgrading PHP backend repositories to ensure continued support and maintain UX

Expedia Group   Seattle, WA
Software Engineering Intern, Checkout Experience   *June 2023 – Sep. 2023*
- Led E2E API testing initiative to design and deploy liveliness checks for the checkout page across Expedia brands
- Conducted extensive refactoring leveraging object-oriented patterns, driving extensibility for new transaction types
- Created a Github Action to automate syncing changes between deployment pipeline UI and Github repository

Northeastern University Khoury College of Computer Sciences   Boston, MA
Teaching Assistant, Fundamentals of Computer Science 1   *Sep. 2021 – May 2022*
- Hosted 4+ office hours and led 2 lab sections per week providing guidance in technical skills and design techniques
- Supported curriculum planning, grading, and exam proctoring for 60+ students.

PROJECTS

Cambridge Street Capital *| Python, C++, Pandas, Numpy, Databento API*   *May – July 2025*
- Engineered a custom backtesting system with Monte Carlo simulation, walk-forward, and resampling analyses for evaluating intraday strategies on U.S. equities
- Used limit order book data from Databento to model market microstructure dynamics
- Implemented volatility-based signal generation and PnL attribution across multiple timeframes

Covey.town Spotify Interactive Area *| TypeScript, ReactJS, Netlify, Heroku, Spotify API*   *Feb. - May 2023*
- Integrated Spotify API into Covey.town for user authentication and synchronized playback across players

Image Processing Application *| Java, JavaSwing, JUnit*   *May - June 2021*
- Built an app with 6 filters, resizing tools, and a JavaSwing GUI for manipulation of jpg, png, and ppm files

TECHNICAL SKILLS

Programming Languages: C#, Java, Kotlin, Python, C++, PHP, SQL, TypeScript, JavaScript, C, HTML/CSS, R
Frameworks & Libraries: .NET, Kafka, Aerospike, Redis, Postgres, gRPC, REST, GraphQL, JUnit, Karate
Tools & Technologies: JIRA, Git, K8s, Docker, Datadog, GBQ, ElasticSearch, Grafana, Terraform, Jenkins, Maven

EDUCATION

Georgia Institute of Technology   Remote, Part-Time
Master of Science in Computer Science   *Sep. 2025 – Dec. 2028*
Northeastern University Khoury College of Computer Sciences   Boston, MA
Bachelor of Science in Computer Science & Business Administration, GPA: 3.76/4.0   *Sep. 2020 – Dec. 2023*
The American School In Japan   Tokyo, Japan
High School Diploma, GPA: 3.95/4.0   *Aug. 2016 – June 2020*