Sebastian Tremblay

tremblay.se@northeastern.edu | Personal Website | GitHub | LinkedIn

Education

Northeastern University Expected May 2025
Bachelor of Science in Computer Science + Artificial Intelligence, Mathematics Minor Boston, MA
Achievements: **3.99/4.00 GPA**, "Top 100 Graduating Seniors" Honoree
Coursework: Algorithms, Data Structures, Computer Systems, Software Engineering, Machine Learning I/II

Technical Skills

Languages:	**(Advanced)** Java · Python **(Proficient)** TypeScript · C# **(Intermediate)** Go · C
Frameworks/Libraries:	Spring Boot (*REST API*) · Pandas · NumPy · Scikit-Learn · React
Cloud/DevOps:	AWS (*Cloud Practitioner*) · Kubernetes · Docker · Terraform
Databases:	Redis · PostgreSQL · MySQL · MongoDB

Work Experience

Founding Engineer — GitMarks, *Boston, MA* September 2024 – Present
- Launched full-stack grading extension for GitHub, exposing students to industry workflows (*React, Go, PostgreSQL*)
- **Managed team of 5 full-time employees**, leading development efforts via one-on-ones, code reviews, and Agile ceremonies. Partnered with Northeastern University stakeholders to define product requirements and release timeline
- Designed highly available AWS architecture (*Docker, Terraform*), achieving 99.99% uptime for **700 weekly users**
- Engineered event-driven microservice for GitHub webhooks (*AWS SQS*), resolving race conditions in 10,000+ repos

Software Engineer Intern — Salesforce, *San Francisco, CA* May 2024 – August 2024
- Released full-stack admin console for Intelligent Document Processing (IDP) tool (*Angular/Bootstrap*), deploying 12 monitoring features to 40 weekly users. **Reduced troubleshooting time 30%** by replacing legacy solution
- Investigated performance impacts of integrating next-gen LLMs into IDP service (*Kubernetes/Splunk*) via synthetic/load testing. Enabled expansion of supported models, **scaling client base 2.4×** with optimized subscription tier coverage
- Constructed 8 routes for Spring Boot/WebFlux REST API to support debugging functionality in IDP Admin Console
- Orchestrated volunteer event with 40+ attendees and charity presenter. **Spotlighted on Salesforce's Instagram**

Software Tools Co-Op — Insulet Corporation, *Acton, MA* July 2023 – December 2023
- Developed QA tool to automate medical device connectivity testing (*C#, MySQL*), processing **6,000 units per day**
- Slashed duration of tool's release cycle 80% by **automating 42 integration testing steps** (*Python*), igniting transition to automated API testing. Spearheaded ReadyAPI adoption, hosting workshops for non-technical QA staff

Software Engineer Intern — Ultimate Kronos Group (UKG), *Virtual* May 2022 – December 2022
- Earned **Employee of Month award** for diagnosing and resolving critical system outage affecting 6,000+ customers
- Developed application in internal hackathon to automate local environment setup for new hires (*Python/Bash Scripts*), reducing average onboarding time by 2 days. Won **"Fan's Favorite" award**, deploying solution to over 300 engineers

Projects & Publications

Kubernetes Scheduling Optimization | *Distributed Systems, Scalability, Performance* November 2024
- Explored scalability constraints in Kubernetes scheduler, revealing performance impacts of limited contextual awareness
- Synthesized 6 SOTA network/hardware-aware methods to optimize latency & GPU efficiency in compute-intensive jobs

High-Performance Data Pipeline | *Python, PyTorch, Kafka, PySpark, MariaDB* June 2024
- Engineered distributed data pipeline with 3 web scrapers and 2 Finance APIs, calculating 20+ financial metrics
- Optimized processing latency and fault tolerance with Kafka and PySpark, processing ∼12 events per second

Raft Consensus Protocol | *Python, Networking, Reliability* April 2024
- Designed and implemented Raft consensus protocol to promote fault-tolerance and consistency in distributed data store
- Achieved 99.92% request success in simulations of 30% packet loss, concurrent partitions, and consecutive leader failure

Facial Detection Attendance Tracker | *Python, GCP, Azure, OpenCV* January 2024
- Leveraged GCP Video Intelligence to detect segments in surveillance footage with faces. Extracted frames via OpenCV
- Trained custom facial recognition model with Azure Face API to classify extracted images, achieving 0.913 AUC-ROC