

Sebastian Tremblay

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WORK EXPERIENCE

Founding Engineer — GitMarks, *Boston, MA* September 2024 – Present

- Architected 0-1 Git-native learning management software to expose students to industry development workflows
- Designed end-to-end AWS infrastructure, ensuring **99.99% uptime for 300 weekly users** via auto-scaling policies, active-active failover, and load balancing. Provisioned with Terraform, serving Dockerized microservices on ECS
- Engineered distributed, event-driven pipeline for processing GitHub webhooks (*Go, AWS SQS*), preserving in-order execution of **20,000 weekly events**. Automated retries and dead-letter queues, eliminating 95% of manual recovery
- Amplified scalability by integrating Redis for caching/session management, slashing GitHub **API queries 22%**

Software Engineer Intern — Salesforce, *San Francisco, CA* May 2024 – August 2024

- Architected observability and monitoring console for document processing service with ~12,000 WAU, providing tools to triage and resolve failures. **Reduced MTTR 30%** by replacing ad-hoc solution with centralized UI (*Angular*)
- Constructed reactive API routes (*Spring WebFlux*) to aggregate metadata across 3 microservices. Enabled real-time debugging workflows for **1M+ document processing executions** via non-blocking I/O queries (*Redis, R2DBC*)
- Informed optimized rollout strategy for next-gen LLMs by benchmarking load tests and analyzing synthetic testing results (*Kubernetes, Splunk*). New models expanded subscription tier coverage, **scaling client base 2.4×**
- Refactored logic and scope for validating document schemas, reducing false errors and **manual review volume 80%**


Software Tools Co-Op — Insulet Corporation, *Acton, MA* July 2023 – December 2023

- Developed QA tool to automate medical device connectivity testing (*C#, MySQL*), processing 4,800 units per day
- Automated 42 acceptance testing steps (*Python*), **slashing length of tool’s release cycle 80%**. Ignited transition to automated hardware integration testing by spearheading ReadyAPI adoption, leading workshops for non-technical staff


Software Engineer Intern — Ultimate Kronos Group (UKG), *Virtual* May 2022 – December 2022

- Earned Employee of Month award for diagnosing and resolving critical system outages **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 Favorite” award, deploying solution to 300+ engineers


PROJECTS

AI Agents for NYT Wordle  | *Python, TypeScript, React, PostgreSQL, Supabase* April 2025

- Developed Monte Carlo, Greedy, Minimax solvers, achieving 95.9% win rate and 4.25 avg. guess rate across 13k words
- Deployed Supabase cache to avoid redundant computation, cutting MCTS runtime 35% and minimizing UI latency
- Leveraged Optuna with TPE Sampler to finetune MCTS model parameters, reducing average guesses by 0.30

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

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

EDUCATION

Northeastern University Boston, MA

Bachelor of Science in Computer Science, Artificial Intelligence. Mathematics Minor **GPA: 3.99/4.00**

AWARDS: Top 100 Influential Seniors Honoree, Dean’s Scholarship (\$16,000/yr)

ACTIVITIES: Type 1 Diabetes Fundraising (Raised \$65,000), Undergraduate Career Mentor (60+ clients)

TECHNICAL SKILLS

LANGUAGES:	Java · Python · TypeScript · Go
FRAMEWORKS/LIBRARIES:	Spring WebFlux · PyTorch · Scikit-Learn · React
CLOUD/DEVOPS:	AWS (<i>Cloud Practitioner</i>) · Kubernetes · Docker · Terraform · Kafka
DATABASES:	Redis · PostgreSQL · MongoDB