Sebastian Tremblay

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WORK EXPERIENCE

Founder — GitMarks, *Boston, MA* — September 2024 – Present
- Pioneered development of Git-native grading software (*Go Fiber, React*) to expose students to industry development workflows. Directed team of five, spearheading architecture planning, strategic product direction, and client acquisition
- 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 20K weekly GitHub webhook events (*Go, AWS SQS*), enforcing in-order processing with DLQs and retries to eliminate 95% of manual recoveries

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 application
- 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 outage **affecting 6,000+ customers**
- Developed application to automate local environment setup for new hires (*Python/Bash Scripts*), reducing average onboarding time by 2 days. Won "Fan Favorite" award in internal hackathon, 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

Vision Transformer Facial Detection ⤢ | *Python, PyTorch, NumPy* — March 2025
- Implemented custom Vision Transformer as pre-filter for facial recognition pipeline, discarding 90% of unusable frames
- Engineered attention map visualization, dissecting information flow across 12 layers to enhance model interpretability

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 Students Honoree, Dean's Scholarship ($16,000/yr)
ACTIVITIES: Generate Product Development, Type 1 Diabetes Fundraising ($65,000), Career Mentor (60+ clients)
COURSEWORK: Deep Learning I/II, Stochastic Modeling I/II, Networking & Distributed Systems, Algorithms, NLP

TECHNICAL SKILLS

PROGRAMMING LANGUAGES:	Java · Python · TypeScript · Go · C · C#
FRAMEWORKS/LIBRARIES:	Spring WebFlux · R2DBC · PyTorch · Scikit-Learn · Numpy · React
CLOUD/DEVOPS:	AWS (*Cloud Practitioner*) · Kubernetes · Docker · Terraform · Kafka
DATABASES:	Redis · PostgreSQL · MySQL · MongoDB