SAMUEL EMARD-THIBAULT

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EDUCATION

Bachelor of Applied Science, Smith Engineering, Queen's University, Kingston, ON, Canada   **Sept 2020 – May 2025**
- **Major:** Computer Engineering with Professional Internship, First Class Honours
- **Relevant Coursework:** Artificial Intelligence, Machine and Deep Learning, Network Security, Distributed Systems, Quality Assurance, Operating Systems, Performance Analysis, OOP, Data structures and Algorithms

PROFESSIONAL EXPERIENCE

Production Engineer (Ads Release Infrastructure), Meta, Menlo Park, CA, USA   **Jul 2025 – Present**
- Built agentic automation systems that reduced site event investigation times by 95%, enabling faster mitigation of incidents across the infrastructure that supports $145B+ in annual Ads delivery.
- Increased observability coverage across core Ads services by developing proactive alerting and health-check pipelines, enabling early detection of anomalies in critical distributed systems.
- Enhanced release reliability by improving slow-rollout and rollback mechanisms, minimizing potential revenue loss from service regressions.
- Drove configuration safety and cost optimization initiatives by standardizing tooling and reducing manual toil for on-call engineers managing large-scale service rollouts.

Software Developer Intern, Centre for Advanced Computing, Kingston, ON, Canada   **May 2023 – July 2024**
- Designed scalable systems using Django REST, Express, Next.js, React, and Flutter, supporting both real-time and batch data processing for external clients.
- Optimized cloud infrastructure by migrating services to AWS Elastic Beanstalk, reducing hosting costs by 30% through efficient container orchestration and RDS configurations.
- Configured load balancing and auto-scaling solutions, improving system reliability and maintaining 99% uptime for critical services during peak loads.

Production Engineer Fellow, Major League Hacking, Remote   **Jun 2022 – Aug 2022**
- Engineered CI/CD pipelines that automated testing and deployment processes to Linux servers, reducing review process workloads and deployment times by over 50% using GitHub Actions, Docker, Bash, and Pytest.
- Implemented system monitoring solutions with Prometheus and Grafana, maintaining 99.9% uptime for critical Linux servers and providing real-time alerts for service issues.

PROJECTS

Sustainable Supercomputing – Undergraduate Capstone Project (*C/C++, Python, Linux, Git*)
- Engineered proactive power management controls using the PowerAPI specification, outperforming Linux power governors by dynamically scaling CPU frequencies based on application-level hints.
- Designed modular C plugins to control CPU frequency scaling across diverse hardware platforms, ensuring portability and extensibility of the solution.

Leaf Hack – QHACKS 2024, 1st place overall (*Next.js, TypeScript, Django Rest Framework, AWS S3, Oracle Cloud, ResNet9, SQL*)
- Developed a Django REST API serving an ML model delivering 95% accuracy for plant disease detection, enabling real-time insights and secure user data processing using PostgreSQL.
- Configured CI/CD pipeline, integrating S3 bucket storage to serve staging data and improve development workflows.

SKILLS

Languages:	**Proficient:** Python, PHP, JavaScript/TypeScript	**Familiar:** Java, Bash, Dart, C/C++
Frameworks:	**Proficient:** Django Rest Framework, Flask, React.js/Next.js	**Familiar:** Spring Boot, Node.js, Flutter
Tools:	**Proficient:** AWS, Docker, Git, RDBMS and ORMs (SQL/NoSQL)	**Familiar:** GCP, OCI