

Nayanamana (Naya) Samarasinghe



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Summary

Detailed oriented privacy/security professional with 6 years of exposure to academic research, and 15+ years of experience on roles pertaining to software, system, and site reliability engineering. Excellent communicator, critical thinker, and thrives in fast-paced and challenging environments, where accuracy and efficiency matter.

Skills

Python | Perl | C# | JavaScript | NodeJS | HTML | CSS | AngularJS | XML | Bash | UNIX | SQL | Machine Learning | Wireshark | Burp Suite | Nmap | Kali Linux | OWASP | VirusTotal | Selenium | SSL/TLS | Distributed Systems | HTTP | JSON | GRPC | Ansible | Micro services | AppDynamics | Observability | Grafana | Tempo | Prometheus | Jaeger | TCP/IP | Splunk | Azure | DAST | SAST | Cloud computing | ServiceNow | NumPy | DNS | DB2 | MySQL | Apache | Tomcat | Git | Agile | Scrum | SDLC | Unit Testing | Penetrating Testing | DevOps | Cryptography | Encryption | OOP | Docker | Kubernetes | Data Structures | Algorithms | CI/CD

Professional Experience

Application Performance Specialist/SRE [Morgan Stanley](#) **Montreal, Canada** **09/2011 – Current**

- Designed/developed applications (e.g., CMS/REST APIs), allowing easy integrations with firm's systems.
- Deployed scalable infrastructure (e.g., Docker, Kubernetes in private/public cloud), increasing efficiency of deployments.
- Lead the team to migrate vendor specific Application Performance Monitoring (APM) products (e.g., AppDynamics) to opensource solutions (e.g., Observability) for monitoring of distributed systems, saving \$1,000,000+ to the firm.
- Coordinated between teams to develop authorization/entitlement models, improving the security of firm's systems.
- Built Splunk operational dashboards, that enhanced the visualization of health in monitored applications (for stakeholders).
- Decommissioned 3 legacy systems, and replaced them with the state-of-the-art, eliminating risks from potential security issues (e.g., zero-day vulnerabilities), and minimizing technical debt.

Researcher (Security/Privacy) [CIISE, Concordia University](#) **Montreal, Canada** **09/2017 – 04/2023**

- Researched on privacy issues (tracking, session replay) in online services (websites, Android apps) --- observed more than 4% of analyzed hospital websites expose PII, and are non-compliant with privacy regulations (e.g., GDPR, CCPA, HIPAA).
- Tested essential websites and examined networked devices using vulnerability scanning/network monitoring tools --- found vulnerabilities (e.g., XSS, SSRF, SQL Injection) in 400+ websites, and weak ciphersuites used for TLS in networked devices.
- Implemented 6 tools to identify security/privacy issues in websites/mobile apps, and [open-sourced](#) to the community.
- Published research findings at top-tier conferences (TheWebConf, CCS), on the exposure of PII, from government websites/Android apps and 23% of evaluated Android apps that use custom encryption --- **see a list of publications [here](#)**.

Programmer Analyst [NTT Data](#) **Halifax, Canada** **09/2005 – 08/2011**

- Developed tools and supported the monitoring of large-scale applications/infrastructure, and reduced the mean time to resolution (MTTR) of outages by 75% --- also performed debugging/troubleshooting of system issues.

Senior Software Engineer [Virtusa](#) **Colombo, Sri Lanka** **02/2000 – 09/2002**

- Increased the efficiency (60%) of business operations of high-profile clients, by designing/developing/integrating/deploying large-scale applications (e.g., client server systems, web applications) --- to automate business processes.

Education

- **Doctor of Philosophy** [Concordia University](#) Montreal, Canada **09/2017 – 11/2022**
Information and Systems Engineering (Security/Privacy)
- **Master of Engineering** [Concordia University](#) Montreal, Canada **09/2015 – 12/2016**
Information Systems Security
- **Master of Science** [University of Ottawa](#) Ottawa, Canada **01/2004 – 09/2005**
Computer Science
- **Bachelor of Science** [University of Colombo](#) Colombo, Sri Lanka **05/1995 – 09/1999**
Computer Science

Certifications

- Microsoft Certified: Azure Fundamentals
- Information Technology Infrastructure Library (ITIL) – V2