

Jérémy Frandon

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Skills

- **IT and Systems Administration:** Linux, Kubernetes, Network, LDAP, Active Directory, OIDC;
- **DevOps:** AWS, CloudFormation, GCP, Terraform, CI/CD Pipelines, GitHub Actions;
- **Cybersecurity:** Security Information and Event Management (SIEM), Intrusion Detection Systems (IDS);
- **Programming Languages:** Python (PyTorch, NumPy, Django), Java, C#, .NET, C, C++, Go, JS (React);
- **Development Methodologies:** Agile, Continuous Deployment, Test-Driven Development;
- **Spoken Languages:** French (Native), English (CEFR C1)

Work History

11/2023–present AtHackCTF Infrastructure Lead, (Volunteer)

Hexplot Alliance

- Designed and implemented the cloud architecture for a CTF event with 600 attendees
- Coordinated the deployment of a Kubernetes cluster and the project's load testing with Terraform, Github actions, Graphana, and bash scripts.
- Engineered a Kubernetes custom resource and its operator using the Go Programming Language
- Deployed Oauth2 / OpenIDConnect authentication for participants
- Maintained > 90% Availability during the event under a CAD\$1000 Cloud Budget

7/2022–present Research Assistant,

Concordia University & Centre gouvernemental de cyberdéfense du Québec

- Engineered AI-ML based threat-hunting analytics pipeline recognizing 80 APTs
- Deployed the threat-hunting subsystem in a unified case-management backend
- Supervised undergraduate intern in automatic conversion of > 2000 detection rules
- Debugged integration between frontend (React) and backend (Flask)

6/2022–present Systems administrator, (Volunteer)

Canadian Naginata Federation

- Audited the CNF's computing infrastructure for inefficiencies
- Developed and deployed a cloud architecture using Oracle Cloud Infrastructure (CentOS Compute) reducing the infrastructure cost to CAD\$5 a year
- Operated SAML Single-Sign-On with Keycloak to facilitate access and identity management (IAM) for all CNF members
- Enabled a 4 people team of volunteers to develop a bespoke member account management software

7/2021–6/2022 Research Assistant,

Concordia University & Ericsson Canada (GAIA)

- Examined the intersection of Industrial Control Systems and 5G Security
- Remodelled a 4-simulator Cyber-physical system co-simulation testbed written in multiple languages (Python, C++, Matlab).
- Examined the security implications of the 3gpp release 16 5G core and RAN
- Clarified specifications for an AI-enabled network security scanning and monitoring tool

- 2/2021–5/2021 Web development consultant,
McGill School of Computer Science
- Advised a 4 people research team on the implementation of a small-scale video sharing platform for an online conference
 - Mediated the relation between contracted developers and the management team
- 1/2020–1/2021 Infrastructure assistant, (Volunteer)
McGill Science Computer Taskforce
- Cataloged the Computer Task Force's infrastructure resources
 - Maintained the free printing service written in Kotlin
- 2/2019–6/2021 IT Assistant,
McGill School of Computer Science
- Maintained 3 different websites using the Django web development framework.
 - Built two scheduling web applications running Apache, MySQL, and PHP.
 - Maintained part of a fleet of more than 100 Linux, Windows, and macOS workstations.
 - Conceived tools to migrate users from LDAP to Microsoft Active Directory in 3 months.
 - Assisted computer science students having general technical/software issues

Volunteering

- 9/2022–8/2024 Tutor in math and sciences,
Toujours ensemble
- Taught high school students within a high school academic perseverance program
 - Communicated insight and learning resources to secondary school students learning math and sciences.

Education

- 7/2023–now Ph.D. Information and Systems Engineering,
Concordia University
- Merit-Based entrance scholarship
- 7/2024–8/2024 Google Cybersecurity Professional Certificate
Coursera
- 7/2021–6/2023 M.A.Sc. Information Systems Security, *incomplete, fast-track to Ph.D.*,
Concordia University
- Transitioned to Ph.D. program due to excellent academic performance and research opportunities
- 7/2022–8/2022 Certificate in university Teaching,
Concordia University
- 9/2018–6/2021 B.Sc. Computer science major, management minor,
McGill University
- Mathematical Primitives for Zero-Knowledge Databases -- Research Project
 - TOTP Hardware, Prototype building -- Research Project
 - Rossy Leader entrance Scholarship, 2018
 - Graduation with Distinction, Spring 2021