

ALEXA HERNANDEZ

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EDUCATION

MCGILL UNIVERSITY

Montreal, QC

- **M.Sc. Computer Science**; GPA: 4.0/4.0 *Sept 2020 – April 2022*
 - **Achievements:** Published paper in IEEE Transactions on Software Engineering; \$23,000 Provincial Research Scholarship (FRQNT); Graduate Excellence Fellowship.
 - **Coursework:** Building Intelligent Systems; Computer Networks; Compiler Design.
- **B.A. Computer Science, Minor in Management**; GPA: 3.91/4.0 *2016 – 2020*
 - **Achievements:** Graduated on Dean's Honours List; Mary Coppin Scholarship.
 - **Coursework:** Software Design; Database Systems; Algorithms & Data Structures; NLP.

EXPERIENCE

SOFTWARE DEVELOPER INTERN

May 2019 – Sept 2020

Société Générale Corporate and Investment Banking

- Developed a production support chatbot using **Microsoft Bot Framework**, **Python**, and **Rasa NLU**, saving support analysts ~30mins/day by answering frequently asked questions.
- Co-created a Chatbot League:
 - Reduced time-to-market to 3 weeks by producing **Python** microservices, documentation, and tutorials.
 - Facilitated adoption by defining best practices and a target technology stack.
 - Minimized duplicated efforts by monitoring all chatbot projects and hosting league meetings, each with 40+ attendees, to increase synergies amongst teams.

SOFTWARE ENGINEERING RESEARCHER

Jan 2019 – Present

McGill Software & Technology Lab

Test Convention Checker

- Devised Suni, a tool to improve test suite quality by detecting inconsistent applications of test conventions.
 - Implemented a **Java** backend that identifies patterns in ASTs and a **Vaadin** frontend to display results.
 - Analyzed open-source test suites and 70+ blog posts to identify test conventions to build into Suni.

Unit Test and Documentation Generator

- Co-developed DScribe, a novel template-based approach to co-generate unit tests and documentation.
 - Improved user experience by simplifying the template instantiation process using **Java annotations** and exposing DScribe as an **Eclipse Plugin**.
 - Conducted a usefulness study of DScribe by applying it 800+ specifications in Apache Commons IO.

FRONTEND DEVELOPER | TEAM LEAD

Sept 2019 – April 2020

Santropol Roulant

- Designed and developed a volunteer management system using **Angular** and **Firebase** to streamline staff operations at Santropol Roulant, a food security NGO.
- Actively engaged with employees to gather requirements and feedback on existing features.
- Prioritized features based on importance and cost. Distributed tasks amongst 4 developers.

OTHER

- **Competitive Gymnastic Coach:** customized progressions, enabling gymnasts to master skills (2013 – 2019)
- **Teaching Assistant:** designed class activities and led lab sessions for Software Design course (2020 – 2021)
- **Movie Recommender:** includes loading balancer and CI/CD, built using **FastAPI**, **Docker**, **MongoDB** (2020)

SKILLS

Languages: Python, Java, SQL (Proficient); Typescript, HTML, CSS (Advanced); C (Familiar)

Technologies: Git, PostgreSQL, SQL Server (Proficient); Linux, Docker, MongoDB, Jenkins, Prometheus (Familiar)

Frameworks: JUnit, Angular; Vaadin (Advanced); FastAPI, Flask, Java Spring Boot, Kafka (Familiar)