

ALEXA HERNANDEZ

EDUCATION

MCGILL UNIVERSITY

Montreal, QC

April 2022

- **M.Sc. Computer Science**; GPA: 4.0/4.0
 - **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.
- **BA Computer Science, Minor in Management**; GPA: 3.91/4.0
 - **Achievements:** Graduated on Dean's Honours List; Mary Coppin Scholarship.
 - **Coursework:** Software Design; Database Systems; Algorithms & Data Structures; NLP.

2016 – 2020

EXPERIENCE

SOFTWARE DEVELOPER INTERN

May 2019 – Sept 2020

Société Générale

- Developed a production support chatbot using **Microsoft Bot Framework**, **Python**, and **Rasa NLU**. Estimated to save 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.

SUNI – TEST CONVENTION CHECKER

Sept 2020 – Present

McGill Masters Research Project

- Devised Suni, a tool to improve test suite quality by detecting inconsistent applications of test conventions.
- Implemented a flexible **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 common test conventions to build-into Suni.

DScribe – TEST & DOCUMENTATION GENERATOR

Jan 2019 – Present

McGill Software & Technology Lab

- Co-developed DScript, 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 DScript as an **Eclipse Plugin**.
- Conducted a usefulness study of DScript by applying it over 800 specifications in Apache Commons IO.

VOLUNTEER MANAGEMENT SYSTEM

Sept 2019 – April 2020

Santropol Roulant

- Designed and developed a volunteer management system, using **Angular**, **Electron**, 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 and distributed them amongst 4 developers.

OTHER EXPERIENCE

- **Movie Recommender:** created a smart, scalable movie recommender using **FastAPI**, **Docker**, **MongoDB**.
- **McGill Impact200 Finalist:** built a platform to match volunteers to local food-organizations.
- **Teaching Assistant:** designed class activities and led lab sessions for a **Java** Software Design course.

SKILLS

Languages: Java, Python, SQL (Proficient); Typescript, HTML, CSS (Advanced); C (Familiar)**Technologies:** Git, PostgreSQL, SQL Server (Proficient); Docker, MongoDB, Jenkins, Prometheus (Familiar)**Frameworks:** JUnit, Angular; Vaadin (Advanced); FastAPI, Flask, Java Spring Boot (Familiar)

EXPERIENCE

Software Developer Intern

May 2019 – Aug 2020

Société Générale Corporate and Investment Banking

- Co-created a Chatbot League to centralize governance, standardize the UX, and streamline the creation process of chatbot-related projects.
 - Produced documentation, tutorials, and microservices to streamline chatbot creation, allowing teams to deploy chatbots in as little as 3 weeks.
 - Organized and hosted 5 league meetings, each with 40 participants, increasing synergies amongst teams as they brainstormed chatbot-solutions to shared challenges. The meetings also lowered the barrier to entry by providing technical workshops.
 - Monitored and provided consulting to 7 chatbot projects, increasing efficiency and adoption as I leveraged my global vision to suggest existing microservices and standardize user experience.

McGill Research Assistant

Jan 2020 – April 2020

McGill University Faculty of Science, Computer Science Department

- Helped develop a novel approach to semi-automatically generate unit tests and software documentation.
- Conducting a usability study of the approach by applying it to an open-source library.
- Co-authored a [paper](#) describing the approach which will be published in a top software engineering research journal, IEEE Transactions on Software Engineering.

Software Developer

Sept 2019 – April 2020

McGill Food Analytics Club — Santropol Roulant Initiative

- Collaborated with McGill students to provide Santropol Roulant, a volunteer-based food security NGO, with digital solutions to boost community involvement.
- Lead the team tasked with designing and developing a centralized volunteer database and a volunteer management desktop application. (firebase, angular - electron)

TECHNICAL SKILLS

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

Frameworks: JUnit, Angular (Proficient); Java Spring Boot, FastAPI, Flask, Django (Familiar)

Technologies: Git, PostgreSQL, SQL Server (Proficient); Docker, Jenkins, GitHub Actions (Familiar)

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COMPETITIVE GYMNASTICS COACH

2013 – 2019

Wimgym Gymnastics Club

- Adapted progressions to each gymnast, enabling them to master the required skills in time for competitions.

Acquired negotiation skills as I managed parents' expectations, gymnasts' fears, and the judges' severity.