# TONY ZEIDAN

Software Developer

## PROFILE

Tony Zeidan holds a Bachelor's Degree of Engineering (Software) from Carleton University and has completed four co-op terms with Canadian Joint Operations Command and NAV Canada. Mr. Zeidan is looking to join a progressive organization where he can use his technical and communication skills, as well as his experience, to help advance the organization's software development goals. Mr. Zeidan brings several skillsets to a team in Conceptual Knowledge, Programming Languages, Frameworks, Tooling, Productivity Software, Operating Systems, and Version Control Systems.

## CONTACT


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## PUBLISHINGS

- Government Reference Document
https://cradpdf.drdc-rddc.gc.ca/PDFS/unc381/p814091_A1b.pdf

- Journal of Open-Source Software (JOSS).
https://joss.theoj.org/papers/c051df96dac973486cc312452575e804

## EDUCATION

**Carleton University**
September 2019 – April 2023
Bachelor of Engineering, Software (SYSC)
- Entrance Scholarship
- Cumulative Grade Point Average: 11.10/12 (A)

## WORK EXPERIENCE

**NAV Canada – Surveillance Engineering**
**April 2022 – September 2022 (5 months)**
**Surveillance Engineering Developer**

NAV Canada owns and operates Canada's civil air navigation system (ANS), holding responsibility for the safe and expeditious flow of air traffic in Canadian airspace. In support of its mission, this project involved the agile development of systems for managing and distributing air traffic surveillance. My duties included the following:

- Participate in daily scrums to review Kanban board tasks and progress.
- Participate in iteration planning, reviews, and retrospectives.
- Create and modify configurable site-specific installation packages for a React JS project using INNO Setup.
- Write test procedures and test cases for a wide range of applications and
- Executed test cases to ensure that they meet quality control standards.
- Perform code reviews for software changes prior to the code being merged into the codebase.
- Extend existing documentation to incorporate new and updated terminologies.

**National Defense - Canadian Joint Operations Command (CJOC)**
**February 2021 – January 2021 (11 months)**
**Developer/Analyst**

CJOC is one of two unified commands of the Canadian Armed Forces whose role is to anticipate and conduct Canadian Forces operations, and develop, generate and integrate joint force capabilities for operations. In support of its mission, the GeoHexVis project involved the generation of custom / re-usable geospatial maps. My duties included the following:

- Develop a Python package for plotting geospatial hexagonally-binned data.
- Develop a script to simplify the process and make it repeatable.
- Present the package at two independent seminars.
- Aid in the analysis of an aeronautical Search and Rescue study.
- Participate in and contribute to weekly team meetings / activities.
- Brainstorm with team members to review and select most-suitable designs.
- Develop supporting documentation, reference documents, external publication documents, and journal articles.
- Participate in weekly team meetings.
- Present project success at two independent seminars.
- Publish software to the Journal of Open Source Software (JOSS).

## APPLIED PROJECTS

**#5. EVASE Capstone Project**
**September 2022 – April 2023 (9 months)**
**Position: Primary Developer, Team Lead**
**Technologies: Python Flask, React JavaScript**

The EVASE graduation pre-requisite project involved a web-based software application designed to detect SQL inject vulnerabilities in web-based Python code. My duties included the following:

- Develop software as part of a team using AGILE methodology.
- Actively participate in weekly meetings with project stakeholders.
- Develop parts of the algorithm for detecting SQL injections.
- Design and implement the front-end of the application using ReactJS.
- Design and implement the back-end of the application using Python Flask framework.
- Design and implement the methodology for storing and removing client code from the server file system.
- Write and execute unit tests for components.
- Write and execute integration tests for the system.

**#4. Simulated Amazon Bookstore**
**January 2023 – May 2023 (5 months)**
**Position: Primary Developer**
**Technologies: SpringBoot, JavaScript/JQuery, Thymeleaf**

The Simulated Amazon Bookstore project involved a web-based software application designed to provide functionality, similar to that of a bookstore on Amazon, where users can purchase books and administrators can update inventory. My duties included the following:

- Collaborate in a team using AGILE methodology to develop a SpringBoot/Thymeleaf/JavaScript application simulating an Amazon Bookstore.
- Implement user functionality for browsing, adding, and removing books from the shopping cart, as well as checking out.
- Develop SpringBoot controllers and services, managing application logic and data flow.
- Create JavaScript and HTML components to enhance the user experience, enabling seamless cart interactions.
- Design and implement website CSS for an engaging and visually-appealing user interface.
- Integrate Aspect Oriented Programming to log service function times, optimizing application performance.
- Assist in the implementation of Circuit Breaker functionality to ensure system resilience and fault tolerance.
- Develop comprehensive integration tests, leveraging GitHub Actions for automated test execution and continuous integration.
- Document code with JavaDoc comments, ensuring readability and maintainability for fellow team members and future developers.

**#3. Elevator Control System**
**January 2022 – July 2022 (7 months)**
**Position: Primary Developer, Team Leader**
**Technologies: Java**

The Elevator Control System project is a multi-threaded real-time system simulating the communication behaviour of elevator cars with a central scheduler to efficiently provide trips to passengers in a building. My duties included the following:

- Design and assemble a program to simulate an elevator control system using the Shared Memory Model and UDP to send requests from one Thread to another.
- Develop an understanding of concurrency and concurrent processes working with and competing against one another.
- Use JIRA to facilitate team member tasks and coordinate efforts.
- Develop unit tests using JUnit framework to ensure consistent output.
- Maintain Javadoc comments to ensure clarity and understanding of the code.

**#2. Ruby Bot**
**September 2020 – September 2021 (13 months)**
**Position: Primary Developer**
**Technologies: Java**

The Ruby Bot project is a Discord chat bot enabling users to communicate with it to manage their chat servers. My duties included the following:

- Use Discord API to subscribe the bot to incoming messages and respond to them accordingly.
- Communicate with other users in the Java Discord API chat (on Discord) to ensure the code is up to date.
- Add commands on a feature-by-feature basis.
- Perform many manual tests in test discord servers and ensure correct operation.

**#1. RISK Game**
**September 2019 – January 2020 (5 months)**
**Position: Primary Developer, Team Leader**
**Technologies: Java, Java Swing**

The RISK Game project is a Java Swing application that uses a Model-View-Controller architecture to simulate the game of RISK. My duties included the following:

- Design and implement algorithms for the Artificial Intelligence (AI) players.
- Create aspects of the User Interface (UI), including the interactive map and stats panel.
- Document functions and codebase using JavaDoc for better understanding and maintainability.
- Apply problem-solving skills to develop game logic and debug issues during development.

## SKILLS

**Conceptual Knowledge**
- Software Development
- Web Development
- Cybersecurity
- Data Science
- Machine Learning

**Programming Languages**
- Python
- Java
- C, C++
- GoLang
- HTML, CSS, JavaScript
- Visual Basic
- Databases: MySQL, SQLite, Oracle

**Frameworks**
- ReactJS
- Python Flask
- SpringBoot
- Junit
- Java Swing
- JavaFX

**Tooling**
- NodeJS
- Anaconda, Pip, PyPI
- Pandas, Numpy

**Productivity**
- Office 365
- JIRA
- Git/GitHub
- Jazz Version Control System

**Operating Systems**
- Windows
- Linux
- QNX 6, 7