



# Zouhir Bensmaia

Ottawa, Ontario, Canada

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## Skills

LANGUAGES: HTML - CSS - JavaScript - Java - MATLAB

Frameworks and Technologies: **Apache, Tomcat, JSP, Applets, Node.JS, Unix, Git, GitHub version control, Hosting on servers**

## Experience

**Natural Sciences and Engineering Research Council of Canada (NSERC) / Research Assistant**

MAY 2017 - AUGUST 2017, GATINEAU

Data collection and manipulation to operate research and compute three-dimensional plots and graphs for academic research analysis. The software Matlab was used to conduct mathematical computations in the native programming language. Machine learning and neural network software were used to conduct predictions using complex algorithms and machine learning testing, training and validation techniques. Academic papers were produced and three presentations were done throughout. The research was graded by professors as having been achieved!

**Walmart Canada / Photo Laboratory Technician**

JANUARY 2020 - CURRENTLY, GATINEAU

## Education

**The University of Ottawa / Masters Degree in Computer Science CO-OP program**

SEPTEMBER 2021 - CURRENTLY, GATINEAU

**The University of Quebec in Hull / Bachelors of Science In Electrical Engineering**

SEPTEMBER 2016 - SEPTEMBRE 2019, GATINEAU

## Personal Projects

**Automaton Robot / JavaScript**

NOVEMBER 2020

This computer program creates a Robot state with embedded parcels to be delivered on a graph. The robot delivers the parcels automatically and autonomously. Four different types of computed routes methodologies were programmed and compared. Directional memory and smart algorithmic optimizations were implemented within the Mail route robot, Goal-oriented robot and the best path robot.

**Counting Scripts from text / JavaScript**

OCTOBER 2020

This code calculates the percentages of the presence of script types within a string. This project made me extremely familiar with higher-order functions. I used several functions to iterate through each string character, determine what script name it corresponds to from its ranges property, count the occurrences of each script type with the iteration process through the string. Then I calculated the percentages of each script name within the string! The code uses a source of data that has an array of objects data structure. Each object withholds information about a particular script through its properties.

**A Correlations coefficient calculator / JavaScript**

OCTOBER 2020

This algorithmic calculator uses an array object with two properties each. One of the properties being an array of strings paired with the second one being a boolean value. Given a data set with a tremendous amount of objects placed as elements within an array the process of calculation manually the correlation between the presence of a specific String with the boolean value would be nearly impossible. Therefore, the program I wrote automates the calculations by providing 2 values to a function. The first value is the String and the second is the

boolean. The algorithm calculates the correlation coefficient  $\phi$  between the two. All projects and more  
Available on GitHub: <https://github.com/ZouhirBensm>