Zakaria Soliman **Software Developer**

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zaksoliman.com
github.com/zaksoliman

EDUCATION

Master of Science, Computer Science
Université de Montréal, Montréal QC AUGUST 2018
THESIS - Predictive Models for Career Progression

Bachelor of Science, Computer Science & Mathematics
Université de Montréal, Montréal QC AUGUST 2016
Undergraduate Student Research Award, NSERC

PROFESSIONAL EXPERIENCE

zaksoliman.com, Montréal — *Software Developer* AUGUST 2019 - PRESENT

- Currently developing WebRTC application for video conferencing and chatting application to allow ESL students to interact with each other. The project is still in alpha version.
- Developed full-stack web application a B2B office furniture provider. The front end is built using React and the REST API in PHP, MySQL is used as a datastore. Deployed the platform on AWS (StrongProject.com)
- Developed a full-stack web educational platform for a group of CEGEPs using Python on the back-end and the web2py web framework to build a REST API. The platform, OCLaRE allows students to create professional-looking lab reports and teachers to easily manage assignments for students (oclare.org).

Technologies: Python, PHP, JavaScript, React, MySQL, AWS

Université de Montréal, Montréal — *Applied Researcher* AUGUST 2018 - AUGUST 2019

Applied natural language processing research. My projects include:

- Built a system to triage incoming emails to the appropriate teams for Intact Data Lab using Python and pandas for the modelling.
- Building a TensorFlow based job recommendation engine by modelling career trajectories after mining data from social media. Data mining was done using a web crawler developed in Python. MongoDB was used for data storage.

Technologies Python, pandas, MongoDB, Tensorflow, spaCy, MongoDB, FastText, GloVe

Université de Montréal, Montréal — *Graduate Teaching Assistant* SEPTEMBER 2016 - MAY 2017

- Prepare and present a weekly programming tutorial to first-year computer science students.
- Contribute to the creation of programming assignments and projects for the students.
- Grade programming assignments.

Technologies: JavaScript

University of Ottawa, Remote — *Software Developer* JUNE 2016 -AUGUST 2016

- Developed back-end algorithms to compute semantic distances between IEML tags and to construct various IEML semantic objects.
- Optimized semantic distance algorithms by writing vector and matrix-based versions of the previously written algorithms.
- Developed and debugged back-end modules and unit tests. Wrote REST API documentation.

Technologies: Python, Numpy, Flask, MongoDB

Université de Montréal, Montréal — *Research Intern* MAY 2014 - APRIL 2015

- Studying the median set of a given permutation set under the Kendall-Tau distance.
- Looking at the variation of the size of the median set and its relationships (if any) to the permutation set.
- Found properties to help us reduce the search space for a median in the set of all permutations of size n.

Technologies: Python

Morneau Shepell, Montréal — *Intern Software Developer* SEPTEMBER 2012 - DECEMBER 2012

- Developed new features that would allow to convert .rof, .txt, .doc files into PDF files and give the possibility to print hard copies.
- Built a C++/CLI bridge between managed code and unmanaged code to allow the usage of newer function within legacy code.
- Developed a tool that would allow clients to verify if they meet all the requirements to install our software solutions.
- Developed several installers using the WiX toolset to install various IIS web applications, desktop applications and setup new SQL server instances on the local machine.
- Debugged and refactored legacy code.

Technologies: .NET 4.0 Framework, C#, C++/CLI, Native C++ and Team Foundation Server.

SKILLS

- **Progrmaming Languages**: Python, JavaScript, C, SQL, bash, HTML, CSS
- **Technologies & Tools**: VS code, vim, MySQL, PostgreSQL, Flask, React, Mithrill, REST, Numpy, pandas, PyTorch, spaCy
- **Languages**: French (fluent), English (fluent)

PUBLICATIONS

- "Learning Career Progression by Mining Social Media Profiles." Advances in Artificial Intelligence, Springer International Publishing, 2019