MATHIEU DUFOUR

SOFTWARE ENGINEER

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EDUCATION

McGill University, 2018-2021

Software Engineering, GPA: 3.7/4.0

Minor in Entrepreneurship

Natural Language Processing Specialization

Coursera, 2021-2022 (Ongoing)

• Done: Classification & Vector Spaces

• In progress: Probabilistic Models

• Next: Sequence and Attention Models

TECHNICAL SKILLS

• JavaScript/TypeScript

• React (JS / TS)

• Node.js (JS / TS)

• Google Cloud Platform (Firestore, Firebase Auth, Cloud Run, Hosting)

• Python

• Java

• PostgreSQL

SUMMARY

Full-stack developer with experience designing, developing, and maintaining user-focused software. Recognized by senior developers for writing reliable code and adapting quickly to new technologies and company standards. I am looking to transition to a machine learning position.

PROFESSIONAL EXPERIENCE

WFHomie (1 year)

Full-Stack Developer *August 2021–Present*

Software Developer Intern *January 2021–April 2021*

`React` `Node.js` `TypeScript` `JavaScript` `PostgreSQL` `Google Cloud` `visx`

- Designed, implemented, and maintained various features on the WFHomie platform, often working on tight deadlines to prepare features for clients.
- Selected projects:
  o Development and ownership of the front end of WFHomie's Analytics platform, using Airbnb's visx charting library for data visualization.
  o Participation in the development an NLP micro service for sentiment analysis and categorization of Slack messages fetched by a connector.

Coveo (4 months)

Software Developer Intern (Full-Stack) *May 2021-August 2021*

`React` `TypeScript` `Scala` `.NET (C#)` `Terraform`

- Implemented a point-and-click interface that improves the user experience of a crucial part of the Coveo platform, used by end users on a regular basis.
- Maintained connectors written in C# and Go.

CGI Inc. (4 months)

Programmer Analyst Intern *May 2019–August 2019*

`C#` `.NET` `PowerShell`

- Developed a desktop application to automate the migration of mailboxes from on-premise Exchange servers to Office 365.
- Wrote PowerShell scripts to automate tedious tasks executed by technicians.

PROJECTS & RELEVANT COURSEWORK

Machine Learning Projects *September 2020–December 2020*

`Python` `TensorFlow` `PyTorch` `NumPy` `Pandas` `Matplotlib`

- Convolution Neural Network for Multi-Label Classification of Image Data
- Implementation from scratch of a multi-class logistic regression model
- Prediction of the number of COVID-19 hospitalizations based on symptom search trends. Comparison of the accuracy of decision trees and KNN.

Brain-Inspired Artificial Intelligence *January 2021-April 2021*

- Gained experience reading, understanding, and applying ML research.
- Implemented of a Hopfield network (RNN to reproduce the associative memory function of the brain) to store and recall images.
- Implemented a temporal difference learning model based on Foster, D J et al.'s paper. Tested the model with an agent in the Morris water-maze task.