

Khalil Beddouch

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WORK EXPERIENCE

Teaching Assistant - Digital Systems Design

Jan 2022 - Dec 2023

Polytechnique de Montréal

Montréal, QC, Canada

- Provided guidance and support to students on topics related to digital systems design, including VHDL, FPGA development and logic circuits.
- Conducted laboratory sessions, demonstrating practical applications of theoretical principles and helping students with hands-on projects.
- Supported the professor in administrative tasks, such as managing course schedules, maintaining student records and organizing course-related events.

Data Analysis Intern

Jun 2022 - Sep 2022

Environnement et Changement climatique Canada

Laval, QC, Canada

- Collaborated with a multidisciplinary team on a project to predict soil humidity levels using satellite imagery and machine learning models.
- Developed a Bash script to automate the collection and processing of over a million meteorological satellite images, ensuring data quality through cleaning, standardizing formats and eliminating outliers.
- Leveraged Python and data libraries such as pandas, NumPy and Matplotlib to calculate detailed statistics and generate visualizations of the model's results, enabling the team to monitor and track the model's performance.

PROJECT EXPERIENCE

Parkinson's Disease Treatment Platform

Jan 2024 - Jun 2024

Polytechnique de Montréal in collaboration with NeuralDrive

Montréal, QC, Canada

- Collaborated in a team of six to design and develop a comprehensive platform aimed at reducing tremors in Parkinson's disease patients through brain stimulation.
- Developed a smartwatch application to accurately measure patients' tremors and transmit data in real-time using web sockets and HTTP.
- Implemented a machine learning model using Python and PyTorch to analyze tremor data and recommend optimal electric pulse values for brain stimulation, significantly reducing the procedure's duration by half.

Visualization of Real Estate Statistics

Jun 2024 - Jul 2024

Polytechnique de Montréal in collaboration with Le Devoir

Montréal, QC, Canada

- Collaborated in a team of six to develop a website featuring interactive data visualizations of real estate statistics in Quebec, utilizing React.js, D3 and Tailwind CSS to create a responsive and dynamic user experience.
- Utilized Agile methodology, conducting regular team meetings, client discussions and weekly sprints to iterate quickly over the product and meet client expectations.

EDUCATION

Bachelor's degree in computer engineering

3.38 GPA

Polytechnique de Montréal

Montréal, QC, Canada

SKILLS

- *DevOps and Cloud Computing*: basic knowledge of cloud platforms: **AWS**, **Google Cloud Platform** and containerization tools: **Docker**, **Kubernetes**.
- *Web development*: proficient in **Angular**, **React** and **Vue.js**
- *Programming languages*: strong proficiency in **C/C++**, **Java**, **Python**, **PHP** and **JavaScript/TypeScript**.
- *Database Management*: Experience with **SQL** and **NoSQL** databases (MySQL, MongoDB).