MATHIEU DUFOUR

+1 (617) 817-0361 | contact@mathieudufour.dev | linkedin.com/in/mathieu-swe | devpost.com/mathieu-dufour

WORK EXPERIENCE

Founding Software Engineer   January 2023 – Present
Kipsi Software, Full-time   *San Francisco, CA (remote)*

- Engineered modern tax efficiency software solutions using Next.js, TypeScript, tRPC, PostgreSQL, and Prisma.
- Spearheaded the development of Kipsi Report, an innovative online document editor with auto-population capabilities for system data.

Full-Stack Software Engineer   August 2021 – January 2023
WFHomie, Permanent Full-time   *Boston, MA*

- Played a pivotal role in product development, which led to WFHomie's acquisition by GoCo Inc. in January 2023.
- Engineered a machine learning (NLP) microservice for Slack message data analysis and maintained robust data pipelines using Kafka and PostgreSQL.
- Leveraged D3.js and Airbnb's visx charting library for data visualization in the People Analytics platform.

Full-Stack Software Developer   May 2021 – August 2021
Coveo, Internship   *Montreal, QC*

- Engineered data connectors, enabling Coveo's AI-powered search as part of the Digital Workplace R&D team.
- Developed a user interface for selecting the data to be fetched by the connectors, enhancing user experience.

Software Developer   January 2021 – April 2021
WFHomie, Internship   *Toronto, ON (remote)*

- Built a booking system using the Stripe API handling on average 21 company-wide transactions/month, as well as an authentication and authorization system serving 1200+ users.
- Developed and launched Kudos, a Slack app installed in 100+ workspaces and serving 500+ monthly users.

Programmer Analyst   May 2019 – August 2019
CGI Inc., Internship   *Quebec City, QC*

- Created a desktop app to streamline mailbox migration to Office 365, reducing labor hours for migrating 10,000 mailboxes from over 42 hours to 30 minutes.
- Automated routine technician tasks with PowerShell scripts.

EDUCATION

Imperial College London   2023 – 2025
Master of Science in Machine Learning and Data Science   *London, UK (remote)*

McGill University   2018 – 2021
Bachelor of Science in Software Engineering, Minor in Entrepreneurship   *Montreal, QC*
Semester abroad at Nanyang Technological University, Singapore

CERTIFICATES

Natural Language Processing Specialization | *DeepLearning.AI*   2021 – 2023

- Classification and vector spaces; probabilistic, sequence and attention models

RELEVANT COURSEWORK

Applied Machine Learning | *Python, TensorFlow, PyTorch, NumPy, Pandas, Matplotlib* September 2020 – December 2020

- Built a convolution neural network for multi-label classification of images, achieving a test accuracy of 99.821%.
- Implemented a multi-class logistic regression model from scratch using Python and NumPy.
- Predicted the number of COVID-19 hospitalizations using symptom search trends, comparing the accuracy of decision tree and KNN (k-nearest neighbors) algorithms.

Brain-Inspired Artificial Intelligence | *Python, NumPy, Matplotlib*   September 2020 – December 2020

- Gained experience reading, understanding, and applying ML research.
- Implemented a Hopfield network (RNN that mimics the associative memory of the brain) to store and recall images.
- Reproduced the temporal difference learning model from Foster, D J et al.'s paper.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, SQL (PostgreSQL), Java, HTML, CSS
Frameworks/libraries: React, Next.js, tRPC, Prisma, Node.js, Express, Redux, Tailwind CSS, Ant Design, Jest, Playwright
Developer Tools: Git, GitHub, GitLab, Docker, Liquibase, Terraform, GCP (Google Cloud Platform), Amazon S3
Machine Learning Libraries: TensorFlow, PyTorch, NumPy, Pandas, Matplotlib, scikit-learn, OpenAI