

## EMPLOYMENT

### Senior Software Engineer, **Personal Stealth Project**

Montreal.  
January 2024 –  
**Present**

- **Viral genomic analyses:** Building a platform leveraging recent AI and machine learning research to explore and analyze viral genome taxonomy. Among others, the platform provides features such as:
  - Identifying virus, infection types, and subtypes through DNA/RNA analysis.
  - Predicting the geographic origin of sequences, such as HIV.
- **Mangement:**
  - Managed a team of five, including data scientists, data engineers, and software engineers.
  - Planned sprints, conducted task breakdowns and refinement sessions, and assigned tasks to team members.
  - Facilitated communication and coordination among team members to ensure alignment and collaboration.
- **Software Development and architecture:**
  - Developed and maintained APIs to handle requests and responses for analyzing multi-gigabyte viral sequence [fasta](#) files.
  - Built a web application (Flutter + Dart) to fluidly read and display multi-gigabyte viral sequences and their analysis results.
  - Managed deployments (CI/CD + Devops) and contributed to ETL development (Python).
- **Environment:** Microservices, REST, .NET8, C#, Dart, Flutter, Python (Django), Rust, Docker, Azure, Azure DevOps, Postgres, MongoDB, XUnit.

### Senior Software Engineer, **Divisions Maintenance Group**

(USA) Remote.  
April 2022 –  
**Present**

- **Software Development:**
  - Developed and maintained microservices and APIs for [DMG Pro](#), a platform connecting facility maintenance providers with diverse job opportunities across the U.S., including plumbing, electrical, and handyman services.
  - Encouraged adherence to software best practices by reviewing code, giving feedback, authoring technical articles and documentation.
  - Implementing CI/CD pipelines and deployment workflows using docker and kubernetes.
- **Design and architecture:**
  - Developed a dynamic validation system for validating data types (Job types, addresses, components, tasks...).
  - Built a communication template engine for marketing teams to manage email, SMS, and notifications templates.
  - Created a CLI (Silimar to [Angular cli](#)) to scaffold APIs in C# and .NET and assist in adding components during development.
  - Facilitated team migration from inefficient Git flows to Microsoft Release Flow, eliminating bottlenecks.
  - Implemented automated Semantic Versioning (SemVer) for multiple projects.
  - Redesigned existing APIs using best practices like DDD and Onion architecture.
  - Built a local QA test environment using **Docker Compose**, **Grafana**, **Loki** and **Prometheus** to reduce costs and improve independence.
  - Improved integration testing for local and CI pipelines using Docker.
- **Environment:** Microservices, gRPC, REST, .NET8, C#, Postgres, MongoDB, Elasticsearch, Kafka, Docker, Kubernetes, Github, AWS.

### Backend Software developer **AddEnergie**

Montréal, Qc, Ca.  
January 2022 –  
April 2022

- **Electric charging stations:** Building APIs and services for AddEnergie's network of electric car charging stations.
- **Environment:** Microservices, .Net core C#, SQLServer, MongoDB, Docker, Kubernetes, Azure DevOps, Microsoft Azure, XUnit.

### Full stack Software developer, **Lloyd's Register OneOcean (ex. MarinePress)**

Montréal, Qc, Ca.  
March 2020 –  
January 2022

- **OneOcean:** Contributed to the development and maintenance of multiple backend and frontend components of OneOcean, a digital solution for maritime navigation. OneOcean integrates compliance, performance, and safety tools to support maritime operations, helping vessels manage data, streamline decision-making, and enhance operational efficiency. Additional responsibilities include:
  - Implemented CI/CD pipelines and handled various DevOps tasks.
  - Authored RFCs, proof-of-concepts, documentation, [technical articles](#) and presentations.
- **Environment:** Microservices, .Net core, Angular, TypeScript, SQLServer, MongoDB, Docker, Kubernetes, Azure DevOps, Microsoft Azure.

### Full stack Software developer, **Stratec global**

Montréal, Qc, Ca.  
Jan 2019 –  
Mar 2020

- **ITMatters:** A platform for managing financial policies, agencies and insurances. Key responsibilities include:
  - Analyzed customer requirements and gathered business rules.
  - Developed the backend for the main web application and a cross-platform mobile app.
  - Contributed to the development of a Xamarin cross-platform mobile application.
  - Implemented CI/CD pipelines and handled various DevOps tasks.
- **Environment:** C#, .Net core, Xamarin.Forms, MVVM, Rx, SQLServer, Azure DevOps, Microsoft Azure, Wasabi (Amazon S3), MSTest.

## Research assistant, **UQAM | Université du Québec À Montréal**

Montréal, Qc, Ca.

- **Main research project:** Automatic detection of presentation layer architectural design patterns (MVC, MVP, MVVM) in Android applications. Key achievements include:
  - Developed a tool for static analysis on Android apps bytecode, source: <https://github.com/AymenDaoudi/Rimaz>.
  - Conducted bytecode exploration and empirical analysis on thousands of Android applications using the developed tool.
  - Authored and published the research paper "[\*An Exploratory Study of MVC-based Architectural Patterns in Android Apps\*](#)" at the ACM SAC Conference (SAC'19).
- **CRIM | Computer Research Institute of Montréal:** Integrated a programming language for writing flight simulator test cases into Eclipse by developing a dedicated plugin.
- **Savoir Faire Linux:** Conducted a comparative study on the performance and energy consumption of VOIP server-less applications. Key activities included:
  - Assessed performance and energy consumption of Jami (ex. Ring), Skype, and Tox, focusing on CPU, memory, and bandwidth usage.
  - Benchmarked and compared the results of the three applications.
  - Developed **Netraf**, a Linux tool for monitoring bandwidth usage. Source: <https://github.com/AymenDaoudi/NeTraf>.

Sep 2016 –  
Dec 2018

## Consultant, **Novasup**

Algiers, Algeria

- **Windows apps:** Developed, and published mobile apps for several Algerian newspapers on the Windows Store.
- **Environment:** Visual Studio 2015, C#, UWP, MVVM, ASP.Net core, Rest, Nunit, Entity Framework, SQLite.

Feb 2016 –  
Aug 2016

## Experience Technical Evangelist Developer (Internship), **Microsoft**

Algiers, Algeria

- **Microsoft Azure:** Collaborated with ISVs and startups to integrate Microsoft Azure solutions.
- **Environment:** Visual Studio 2015, C#, UWP, Entity Framework, Rest, Nunit, SQLite, Microsoft Azure.

Dec 2015 –  
Aug 2016

## .Net developer, **HydraPharm Group**

Algiers, Algeria

- **Software development:** Developed internal software for reporting and sales services.
- **Environment:** Visual Studio 2013, C#, WPF, MVVM, WCF, Nunit, DevExpress, SQLServer 2008.

Jan 2014 –  
Dec 2015

## CERTIFICATIONS

- **Microsoft Certified Specialist:** Programming in C#: Microsoft, License E716-0701(2014).

## EDUCATION

### Master of Science in Computer Science, **UQAM | Université du Québec À Montréal**

Montréal, Qc, Ca

- **Main research project:** Automatic detection of presentation layer architectural design patterns (MVC, MVP, MVVM) in Android applications.
- **Supervising:** Supervising interns building Xamarin applications.
- **Teaching:** Giving Java courses and workshops for Bachelor students.

Sep 2016 –  
Dec 2018

### Master degree in computer science, **ESI | Ecole Nationale Supérieure d'Informatique**

Algiers, Algeria

- **Final Project:** Studied, modeled, implemented, and simulated the ranking of web pages using Google's PageRank algorithm. Source: <https://github.com/SamTheDev/PageRank-Analyzer>

Sep 2007 –  
Juin 2014

## LINKS

- **in LinkedIn:** <https://www.linkedin.com/in/aymendaoudi>
- **Github:** <https://github.com/AymenDaoudi>
- **stackoverflow:** <https://stackoverflow.com/users/2002048/aymendaoudi>

## PRIZES AND AWARDS AND OTHER EXPERIENCES

- **Exemption Scholarship | 2016-2018 | UQAM (Université du Québec À Montréal):** Exemption from additional tuition fees for international students.
- **Microsoft Student Partner | 2011-2013 | ESI (Ecole Nationale Supérieure d'Informatique):** Participating and organising DevCamps and Microsoft events in Algeria: Imagine Cup, Microsoft TechDays and Microsoft Connect

## LANGUAGES

- **English:** Fluent.
- **French:** Fluent. Level C1: 579 (Test de Connaissance du Français, TCF).
- **Arabic:** Mother tongue.

## HOBBIES

- Music (Guitar, Drums), Philosophy, History, and ... programming too !