

AYMEN DAOUDI

Software Development Engineer

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EMPLOYMENT

Senior Software Engineer, **Stealth Project**

Montreal.

January 2024 –
Present

- **Viral genomic analyses:** Building an AI/ML platform for viral genome taxonomy analysis with features including:
 - Virus, infection type, and subtype identification through DNA/RNA analysis.
 - Geographic origin prediction for sequences like HIV.
- **Management:**
 - Led a team of five data scientists, engineers, and software developers.
 - Managed sprint planning, task breakdown, and team coordination.
 - Facilitated cross-functional collaboration and alignment.
- **Software Development and architecture:**
 - Developed APIs for analyzing multi-gigabyte viral sequence [fasta](#) files.
 - Built a Flutter web application for displaying viral sequences and analysis results.
 - Managed CI/CD pipelines and ETL processes in Python.
- **Environment:** Microservices, REST, Python(Django), C#(.NET8), Dart(Flutter), Docker, Azure, Azure DevOps, Postgres, MongoDB.

Senior Software Engineer, **Divisions Maintenance Group**

(USA) Remote.

April 2022 –
Present

- **Software Development:**
 - Developed microservices and APIs for [DMG Pro](#), a platform connecting maintenance providers with U.S. job opportunities.
 - Promoted software best practices through code reviews, documentation, and technical articles.
 - Implemented CI/CD pipelines using Docker and Kubernetes.
- **Design and architecture:**
 - Built a dynamic validation system for data types (jobs, addresses, components).
 - Created a template engine for marketing teams to manage communications.
 - Developed a CLI tool to scaffold C#/.NET APIs and components.
 - Helped teams migrate from Git flows to Microsoft Release Flow, improving efficiency and reducing bottlenecks.
 - Implemented automated Semantic Versioning (SemVer) across projects.
 - Redesigned APIs using DDD and Onion architecture principles.
 - Built a local QA test environment using **Docker Compose**, **Grafana**, **Loki** and **Prometheus** to reduce costs and improve independence.
 - Enhanced integration testing using Docker for local environments and CI pipelines.
- **Environment:** Microservices, gRPC, REST, Python(Django), TypeScript(NestJS), C#(.NET8), Unit & Integration Testing, 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, C#(.Net core), SQLServer, MongoDB, Docker, Kafka, Kubernetes, Azure, Azure DevOps.

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

Montréal, Qc, Ca.

March 2020 –
January 2022

- **OneOcean:** Developed and maintained backend and frontend components of OneOcean, a maritime navigation software that integrates compliance, performance, and safety tools. Key contributions:
 - Implemented CI/CD pipelines and managed DevOps operations.
 - Authored RFCs, documentation, [technical articles](#) and presentations.
- **Environment:** Microservices, C#(.Net core), Python(Django + FastAPI), TypeScript(Angular), Unit & Integration Testing, SQLServer, MongoDB, Docker, Kafka, Kubernetes, Azure, Azure DevOps.

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), Unit & Integration Testing, Xamarin, MVVM, Rx, SQLServer, Azure, Azure DevOps, AWS.

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

Montréal, Qc, Ca.

- **Main research project:** Automatic detection of 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 (SAC'19).
- **CRIM | Computer Research Institute of Montreal:** Plugin development and a programming language integration in Eclipse for writing flight simulator test cases.
- **Savoir Faire Linux:** Conducted a comparative study on the performance and energy consumption of VOIP serverless 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:** C#, UWP, Entity Framework, Rest, Unit & Integration Testing, SQLite, Microsoft Azure.

Dec 2015 –
Aug 2016

.Net developer, **HydraPharm Group**

Algiers, Algeria

- **Software development:** Developed internal software for reporting and sales services.
- **Environment:** C#, WPF, MVVM, WCF, Unit & Integration Testing, 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 !