

Didier Amyot

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<https://all-dressed-programming.com>

Relevant Experiences

Consultant Senior Backend Engineer

2024-01 to ...

Plusgrade

Helping different teams in the organization building new features and fixing long lasting issues. Examples of problem fixed are stacking of messages in an SQS queue and the creation of an ETL process built around AWS Lambda.

Technologies: Java, AWS Lambda, AWS SQS, spring boot, Python

Computer Science Teacher

2023-07 to ...

Collège Ahuntsic

Teaching web and data oriented software engineering courses in a public Cegep. Courses' documents are freely accessible at <https://all-dressed-programming.com/courses/>.

Technologies: C#, Python, Deno, nodejs

Founding Engineer

2023-01 to 2023-08

Stealth startup

Founding engineer of a two-person startup aimed at helping small and medium retailers' purchasing side. In a nutshell, the goal was to aggregate the data retailers have from their ERP, POS, and other sources into actionable purchasing ideas.

During that time, I have done some consultancy and teaching to pay the bills.

Technologies: Java, PostgreSQL, ClickHouse, NixOS

Tech Lead

2022-06 to 2022-11

Ivado Labs

Leading a team working on a demand forecasting project for a large retail customer. The project optimizes in-store promotions for a leading Canadian retailer. The team consists of data scientists and software engineers.

The pipeline is written in Python and leverages DuckDB to maximize vertical scaling and rapid development. The deployment is done on Google Cloud to integrate with the customer's infrastructure.

Technologies: Python, Google Cloud, DuckDB

Team & Tech Lead

2018-11 to 2022-04

Behavox

Acting tech-lead and team-lead of a team of around ten people. The team's purpose is to build an "app store" on top of the Behavox platform to allow customers to enhance and customize their deployment. The team's responsibilities include all the infrastructure to develop, deploy, and run the applications.

The team composition is around three backend engineers, three frontend engineers, two QAs, and close collaborators. The team-lead role includes one-on-one, performance reviews, and mentorship.

The tech lead is responsible for taking final decisions on technical architecture solutions. To display leadership, the tech lead is the most active contributor to the project.

The project itself is architected in two separate sections. The first part is internal and its end users are Behavox's data scientists who write the applications. The applications are written in Groovy and the tooling to build the applications is written in Go, Python, and Clojure Script. The second part of the infrastructure is responsible to install and run the application on the customer's platform. All this section is written in Java using the spring boot framework.

Technologies: Java, MySQL, Python, Clojure Script, AWS

Senior Data Engineer

11-2016 to 11-2018

SquarePoint Capital

Part of the team responsible for integrating third-party datasets into internal data pipelines and developing the internal machine learning platform.

The development part of the position involves three main parts. First, creating data ingesters and integrating these with internal pipelines. Second, maintaining the internal ML platform used by traders to use the internal datasets. Lastly, maintaining the internal scheduling platform that executes all the data ingesters.

In addition to development, the role includes mentoring junior members and providing technical support for traders.

Technologies: Python, Go, PostgreSQL, AWS, Kafka, q/kdb+

Senior Programmer

2015-05 to 2016-11

YouGov (BrandIndex)

Part of an elite small team that manages the presentation of survey results to customers via a web application. The team handles the entire stack from the custom database to the user interface.

The daily tasks are to maintain and add new features to the web application. The workload is well distributed between the AngularJS frontend and a cherrypy (Python) backend.

YouGov was one of the best Python shops around. YouGov created the cherrypy web framework and created its own application platform named Velociraptor before the raise of docker.

Technologies: Python, JavaScript, AngularJS, cherrypy

Programmer (Software Development Engineer I)

2014-08 to 2015-05

Amazon.com (Amazon Prime)

Part of the *Prime Acquisition* team based in Seattle that is responsible to render advertisements to attract new Amazon Prime customers.

The application stack is mainly made in Java using the spring boot framework and an impressive collection of proprietary packages and services.

Technologies: Java, spring boot, service-oriented architecture

Programmeur

2011-12 à 2013-06

YouGov

Part of the team creating the web application that presents survey results to the customers. The job involved making all the different charts and bringing the application logic from the server to the client.

Technologies: Python, Java, numpy, Django, d3.js

Relevant Open Source Contributions

 gitlab.com/didiercrunch

 <https://all-dressed-programming.com>

 github.com/didiercrunch

All Dressed Programming Blog

<https://all-dressed-programming.com>

A technical blog that takes a holistic approach to application development. Blog post topics include NixOS, Deno, and Typst. The writing style tries to be impersonal and backed by as many sources as possible.

The blog itself is an interesting piece of code. Based on the Hugo static website generator, the blog is deployed on the serverless Deno Deploy platform to be able to host its own analytic and comment platforms.

Escarmouche

<https://gitlab.com/didiercrunch/escarmouche>

Work in progress that aims to implement a centralized ledger for testing algorithms that require exchanges of mock securities between different parties. The project roadmap includes supporting currencies with interest rates and multi parties (more than two) transactions.

The project uses Rust as the principal programming language.

Ballephenix Web Site

<https://gitlab.com/ballephenix/website>

Over-engineered static website displaying softball game scores. Written in JavaScript, using mithril and RequireJS, the website is deployed in GitLab Pages and even includes its own implementation of the spritz cryptosystem.

The website has been running since 2027 at ballephenix.com.

Go Paillier Cryptography Implementation

<https://github.com/didiercrunch/paillier>

Implementation of the Paillier cryptosystem and its threshold version as defined by Damgård in the Go programming language. Lately, the project has regained life as many people have submitted brilliant pull requests.

Doorman - A/B Feature Gating

<https://github.com/didiercrunch/doormanserver>

Feature gating framework based on the siphash hash function. The idea is to have a centralized server where end users can set gate states and where clients can register to gate states. A client library is written for the Go programming language.

The server is written in Go and can use a variety of communication channels (ZeroMQ, nsq, ...) with the registered clients.

lein-jupyter

<https://github.com/clojupyter/lein-jupyter>

Leiningen plugin to integrate Clojure workflow with Jupyter notebook. The project started after the clojure-conj 2017 in collaboration with the Clojure machine learning community.

Education

Master in Mathematics

Incompleted

Université du Québec à Montréal (UQÀM)

Started a master in mathematics (geometry) at Université du Québec à Montréal (UQÀM) in 2010.

Completed 5 courses out of 6.

Bachelor in Fundamental Mathematics

2004-09 to 2009-06

Université du Québec à Montréal (UQÀM)

General undergraduated studies in fundamental mathematics which includes courses in algebra, analysis, topology, combinatorics, statistics, probability and stochastic processes.

Bachelor in Fundamental Mathematics

Attending classes while not registered is a great pleasure.

Homological Algebra part of master in mathematics at UQÀM.

Creating Small Business part of the MBA at McGill.

Combinatorics and Algebra part of the master in mathematics at UQÀM.

Skills

Programming Languages Python, Java, Clojure, Rust, Go, JavaScript

Databases Sql, NoSQL, Kafka, Spark, Solr

Web Technologies HTML, RESTful, React, mithril, Reagent

Clouds AWS, Google Cloud

Methodologies RESTful, test-driven development, Twelve Factor App, functional programming, object-oriented programming

Operating Systems Linux, Ubuntu, Centos, NixOS, Systemd

Langues English and French