Tawfic Abdul-Fatah

Software Developer | Python | Generative AI

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For detailed certifications, project links, and interactive content, visit the online version at: https://tawficfatah.github.io

Summary

Experienced software developer transitioning to Python with expertise in generative AI and prompt engineering. Background spans full-stack web development, database design, and teaching computer science. Proven track record working with diverse tech stacks from legacy systems to modern frameworks.

In an ancient life, I worked as a C programmer using Unix-based middleware, then became a Java programmer focusing on web applications. I decided to go back to school to study Computer Science and Mathematics—this was before MOOCs. During my school years I worked as a TA, primarily helping with first and second year computer science courses. I am currently transitioning to my favorite language, Python, and getting acquainted with Prompt Engineering, GenAI, and AI programming in general.

Technical Skills

Languages:

Python, SQL, JavaScript, Bash, C (Past: C#, Java)

Frameworks:

ASP.NET Core, Entity Framework, Vue.js, J2EE

AI & Automation:

ChatGPT, Claude, Claude Code, Prompt Engineering, Generative AI

Python Libraries:

Pandas, NumPy, Matplotlib, Plotly, Dash, scikit-learn

Databases:

MS SQL Server, PostgreSQL, Oracle, DB2, SQLite

Tools:

Git/GitHub, Jira, Confluence, Docker, Linux, Jupyter Notebooks

Professional Experience

Software Developer

Labgo | Montreal, Quebec, Canada

September 2021 - August 2022

Labgo is an initiative led by John Abbott College, Cégep Gérald-Godin and Collège de Bois-de-Boulogne, connecting IT professionals with real-world projects. Worked on a full-stack web application for IroSoft using Vue.js, .NET Core, and MS SQL Server.

- Designed normalized database schema (3NF) for the application
- Developed RESTful API controllers using ASP.NET Core and C#
- Implemented data access layer using Entity Framework Core
- Created comprehensive backend service tests using xUnit
- Developed frontend automated tests using Selenium WebDriver with Python
- Managed code repository using Git/GitHub and coordinated sprints via Jira

Technologies: .NET Core 3.1, ASP.NET Core, Entity Framework Core, C#, MS SQL Server 2019, Vue.js 2.1, JavaScript, Git/GitHub, Selenium, Python, Jira, Confluence

Undergraduate Teaching Assistant

Carleton University | Ottawa, Canada

September 2013 - December 2019

Supported computer science courses spanning introductory to advanced topics while pursuing degree.

Courses: Introduction to Computer Science I & II, Business Applications Development, Introduction to Systems Programming, Abstract Data Types and Algorithms, Introduction to Computational Thinking

- Conducted lab sessions and tutorials for undergraduate students
- Graded programming assignments and midterms
- Held office hours for student consultation
- Taught Python, Java, C, Linux, OOP, OOA, and UML

Programmer

Canada Revenue Agency | Ottawa, Ontario, Canada

May 2009 - August 2010

Worked with DB2 and WebSphere support groups across two contract periods.

- Troubleshot database and application server issues
- Automated routine tasks using scripting
- Evaluated and assessed new technologies for adoption
- Assisted with testing new installations and upgrades

Technologies: DB2, SQL, Java, JDBC, J2EE, PureXML, z/OS, Linux/Bash

Software Developer

Digital Oilfield | Calgary, Alberta, Canada

October 2002 - August 2004

Developed web application for online invoicing tailored to the Oil and Gas industry.

- Developed JSPs and Servlets using Java and J2EE
- Implemented business logic and database interactions
- Worked with Oracle database and Weblogic application server

Technologies: Java, J2EE, SQL, Oracle, Weblogic

Education

Bachelor of Computer Science (High Distinction)

Carleton University | December 2018

Minor in Mathematics

AEC Analyste Programmeur

Collège de Bois-de-Boulogne | October 2021 - August 2022

Programmer Analyst

Professional Certifications

DataCamp Professional Certifications

10 tracks completed: Python Developer, Associate Python Developer, Data Analyst, Associate Data Analyst, Associate Data Engineer, Python Programming Fundamentals, Python Programming Toolbox, Python Data Fundamentals, Data Visualization with Plotly and Dash, GitHub Foundations

Skills: Python Programming, Data Analysis, SQL, Data Engineering, ETL Pipelines, Plotly & Dash, Git & GitHub

Coursera Professional Certifications

4 specializations: ChatGPT: Master Free AI Tools to Supercharge Productivity, Generative AI Automation, Prompt Engineering, Generative AI Assistants

Advanced Course: Claude Code: Software Engineering with Generative AI Agents

Skills: Generative AI, Prompt Engineering, ChatGPT, AI Automation, Claude Code, AI Assistants, AI-Assisted Development

Languages

English: Native or Bilingual | **Arabic:** Native or Bilingual