

Selmane Tabet (MSc)

Experienced in backend software development, APIs, data, and systems. Having over 6 years in training and professional experience with startups, SMEs, and academic institutes across the globe.

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Always keen on learning new things in the tech space and sharing the passion along the way.

WORK EXPERIENCE

Computer Science Outreach Officer - Placement

August 2023 – Present

Cardiff University, Wales, UK

Authored and taught computer science educational material to aspiring engineers.

- Led teams in the development, marketing, and delivery of **four** software development workshop series.
- Conducted over **70** computer science workshops in **8** months for over **3500** people.
- Raised awareness of tech-related opportunities in **nine** local community centers.
- Attested that all delivered materials are compliant with national educational standards.

Software Engineer - Intern

April 2022 – July 2022

Snoonu, Doha, QA

Spearheaded the development of an API gateway that enabled Shopify merchants to send fulfillment orders, thus increasing revenue by over **20%** by integrating Shopify into the internal fleet management system.

- Increased efficiency by automating order fulfillments using webhooks, a Flask API and a database.
- Established an efficient CI/CD pipeline for project deployments and version control.
- Introduced an internal set of metrics used to assess the performance of the order dispatch algorithm.
- Ensured **99.99%** availability and reliability of developed services by improving error handling routines.
- Improved the PostgreSQL query performance by up to **5x** via table distribution (AKA sharding).

Software Engineer - Intern

January 2022 – April 2022

sKora Tech, Doha, QA

Developed the backend infrastructure, including core API microservices, data scraping routines, and data analytics using cutting edge technologies.

- Automated the data acquisition process using custom scraping scripts using BeautifulSoup, acquiring over **20000** data points from two different sites.
- Enabled **15** remote app developers to communicate with the data via the development of a RESTful API using FastAPI.
- Leveraged acquired data to perform additional statistical analysis to provide deeper insights.
- Communicated the details of the internal infrastructure through documentations and presentations.

EDUCATION

Cardiff University, Cardiff, Wales, UK

Master of Science in Computing and IT Management with Placement – In Progress

Hamad Bin Khalifa University (HBKU), Doha, QA

Bachelor of Science in Computer Engineering – June 2021

AWARDS

First Place in HBKU CSE Coding Competition

March 2021

Intra-college competition coordinated by the HBKU Math & Computer Club for students to solve basic Python debugging issues and programming problems in a timed setting.

SELECTED PROJECTS

Project HARPY

January 2020 – December 2020

An implementation of a monitoring system for the detection and classification of anomalous and rogue IoT devices within a local network using machine learning. Tech stack contains React Native, Firebase and Python.

- Defined data preprocessing functions including capture file processors and feature extraction algorithms for machine learning.
- Setup a live experiment where IoT devices were connected, then set up a NIDS to capture all simulated network traffic across the LAN for neural network training.
- Authored a technical report in LaTeX, covering every part of the project.

Flask-based Website with User-Generated Content

December 2022 – January 2023

A Flask-based website that uses web technologies including MySQL for data storage, OpenShift for deployment, Jinja for templating HTML pages, and Bootstrap 5 for styling. Based on the MVC architecture.

- Composed deployments using Docker and database models using SQLAlchemy.
- Strengthened security by leveraging Flask extension libraries.

Cryptocurrency Investment Adviser

October 2017 – June 2021

A program that is meant to be used as a helper for investors when making decisions related to cryptocurrency investments.

- Created a dashboard that allows users to login, invest and cashout cryptocurrency using Tcl/Tk
- Retrieved live data via GDAX API in real time to represent current cryptocurrency trends.
- Incorporated OLS regression to devise indicators that can aid in the users' investment action decisions.

Wordle-solving Bot

November 2022 – December 2022

A Python-based program that uses a dictionary of known words and the feedback of a word's Wordle configuration (yellows/grays/greens) to give the best matching word for the current configuration.

Project Zamanya

May 2019 – September 2019

Implemented data processing routines that leverage APIs for the Zamanya eHealth framework; a Python-based library that aids in the determination of sleep quality using sleep data via machine learning.

- Designed a pipeline for real-time data acquisition and processing of Fitbit user physical activity data.
- Guaranteed data formatting compliance of new incoming data with the framework by using Pandas.
- Provided over 7500 data points for training the initial machine learning model.

SKILLS

Programming Languages: Python, C, C++, Java, JavaScript, MATLAB, Assembly, Verilog, VHDL, ARM ISA

Technical skills: API and Web Development, Process Automation, Database Modeling, Network Analysis, SDLC, Agile Methodologies, Firmware Programming, Digital Signal Processing, and other hardware-focused techniques.

Tools and Frameworks: Git, Pandas, Flask, FastAPI, SQL, PostgreSQL, MySQL, SQLite, Azure DevOps, GCP, Docker, OR-Tools, OpenShift, Bootstrap, Jinja, HTML/CSS, Markdown, LaTeX, Keil MDK, Intel Quartus, Jira.

Media Production Tools: Adobe CC (Premiere Pro and After Effects), FL Studio, Audacity, OBS Studio

Soft Skills: Communication, Teaching, Presentation, Project Management, Leadership.

LANGUAGES

English – Fluent (C2)

Arabic – Fluent (C2)

Spanish – Upper Intermediate (B2)

Mandarin – Intermediate (HSK4)

Urdu – Beginner (A1)

Italian – Beginner (A1)