Harith Al-Safi

Electronics and Computer Engineer

About me

An engineer with great enthusiasm towards data science and Artificial Intelligence. Some of my hobbies are working out, trading and investment. A deterministic outlook characterize my approach to tackling challenges.

Experience

Frontend Developer

Aug 2023 - Ong

Velz Travel

♀ Remote

- Directed the frontend of a travel web app for a startup built with next.js, react.js and Typescript
- Developed UI components using Material UI following Figma design guidelines and business logic using nodejs
- Collaborated with developers using Jira whilst working on Java springboot backend with postgres and docker
- Delivered app through agile development whilst using JEST for unit testing, optimized using SSR and SEO friendly

Software Engineer (Placement Year)

July 2022 - July 2023

Johnson Controls R&D department (JCI)

♀ London UK

- Administered legacy C/C++ projects whilst fixing bugs, adding new features, refactoring and migration
- Developed C# .NET apps and libraries used for IoT, fire detection simulations, R&D, and data analysis
- Participated in a tech challenge by designing analytics web dashboard with React JS for predictive maintenance
- Maintained python automation scripts used for pdf report generation
- Managed a team of 10 interns to create a full business pitch and ended up placing 2nd amongst 18 competitors

Software Developer Freelance

₩ Nov 2021 - Feb 2022

Paperound

- **♀** Leeds UK
- Developed signal processing applications in Matlab and Python Scipy using Fourier Transform
- Designed data visualization Jupyter Notebooks with Matplotlib, Seaborn, Numpy and Pandas using Python
- Programmed a minimal REST api with nodejs Express.js and MongoDB and used PostMan for endpoint testing
- Engineered C++ libraries with DevOps using Travis-CI, GoogleTest, Docker, Cmake, Doxygen and MkDoc

IT administrator

🛗 Jun 2020 - Mar 2021

Mesopotamia Group

Amman Jordan

- Collaborated with a team to build a local file server on Ubuntu 18.04 LTS built using Apache and Nextcloud
- Administered the system using Bash, PowerShell and Nmap with SSH tunneling and port forwarding
- Engineered a complex version using a raspberry pie, network interface card and attached storage.
- Implemented Linux networking and protocols using IP addressing and routing for cloud hosting

Education

BEng (Hons) in Electronics and Computer University of Leeds (UoL)

Sept 2019 - June 2024

▼ First-Class Honors

- Embedded systems, Microprocessors, FPGA, Circuit Analysis, Signal processing, Networking, Compiler design
- Cloud and Parallel computing, Secure and Distributed systems, Cybersecurity, Software Engineering, Research

Skills

Technical: C C++	Java C# HTML5	CSS JavaScript Dart Python Mar	tlab SQL Bash
Linux Docker Azu	re AWS Firebase	Jira Git SQLite MongoDB .NET	WPF React
Next.js Tailwind CSS Material UI Qt Flutter Django Express.js NumPy Matplotlib SciPy			
TensorFlow Pandas Scikit-learn CMake Node.js Arm Mbed Arm Keil Arduino AutoCAD			
Soft: Management Leadership Motivated Deterministic Communication Problem solver			

Languages: Arabic (Full Professional) English (Full Professional) Spanish (Elementary)

₩ Oct 2022 - Jul 2023

¶ JCI

- Re-designed a legacy CLI project to a GUI with C# .NET WPF using MVVM and multithreaded design
- Invented an object-oriented scripting language with a custom compiler and runtime memory access.
- Integrated SQLite database, Excel I/O features, data analysis tools and serial communication protocols
- Communicated with engineers to develop and manage a product life cycle on the app's design and features

Jobhive

Sept 2023 - Ongoing

Personal

- Developed a fullstack web app with Nextjs, Reactjs, Chakra-ui and Typescript managing frontend and backend.
- Engineered a monolothic backend REST API routing and endpoints with CRUD Operations using nextjs
- Collaborated with a team using Jira issues and git to sustain clean, maintainable and efficient code
- Developed project management skills from designing the app in figma to implementing it

NotePad

Mov 2021 - Ongoing

Personal

- Programmed a cross-platform note app with Flutter and Dart
- Established backend using cloud authentication services with Firebase and storage with SQL CRUD
- Using the BLoC pattern for state management and the Provider package for dependency injection
- Used KerasRL library for reinforcement learning with human feedback to predict user's next note

Home Automation Embedded System

¶ UoL

- Engineered circuits for I/O functionality using data sensors, potentiometers, buttons and resistors.
- Programmed control system using C++ for home appliances such as temperature, air conditioning and lighting
- Developed menu oriented user interface using LCD display and joystick deployed on STM32 board ARM MCU

Professional Courses

Data Analysis with Python

- Develop Python code for cleaning and preparing data for analysis
- Perform exploratory data analysis and analytical techniques to datasets using Pandas, Numpy and Scipy
- Manipulate data using dataframes, understand data distribution, perform correlation and create data pipelines
- Build and evaluate regression models using machine learning scikit-learn for prediction and decision making

Databases and SQL for Data Science with Python

Sept 2021

- Analyze data within a relational database on the cloud using IBM DB2, SQL, Python
- Construct SQL CRUD operations and compose views, transactions, stored procedures and joins.

Python for Data Science, Al & Development

Aug 2021

- Demonstrate proficiency in using Python libraries such as Pandas, Numpy, and Beautiful Soup
- Access web data using APIs and web scraping from Python in Jupyter Notebooks.

Data Science Methodology

₩ Aug 2021

- Apply the six stages in the Cross-Industry Process for Data Mining (CRISP-DM) to analyze a case study.
- Evaluate which analytic model is appropriate among predictive, descriptive, and classification models used.

Extracurricular

Event Coordinator Volunteer IEE RAS ICRA

Mov 2021 - Feb 2022

♀ London, UK

Web Developer hackathon Royal Hackaway v6

Mov 2021 - Feb 2022Value London, UK

Game Developer hackathon

Mov 2021 - Feb 2022

Pygames hackathon Microsoft

₩ Nov 2021 - Feb 2022

♀ Remote

Al Agent hackathon Lablab

Remote