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

Marg 2023 - Nov 2023

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)

m 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

Mov 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

M Sept 2019 - June 2024

University of Leeds (UoL)

▼ 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



= Flojects

- 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

JPS

Sept 2023 - Ongoing

Personal

¶ JCI

- 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, AI & Development

- 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

Mov 2021 - Feb 2022

IEE RAS ICRA

Web Developer hackathon

♀ London, UK

Royal Hackaway v6

₩ Nov 2021 - Feb 2022

Game Developer hackathon Pygames hackathon Microsoft

Remote

♀ London, UK

Al Agent hackathon Lablab Mov 2021 - Feb 2022

Remote