Harith Al-Safi

Leeds, UK +447444585915 harith.alsafi@gmail.com https://harith.io/
Electronics and Computer Engineer github.com/harith-alsafi linkedin.com/in/harith-al-safi

About me

An engineer with a great enthusiasm towards data science and Artificial Intelligence. I post regular workout and nutrition contents. Am quite fervent about blockchain, trading and investment.

Experience

Frontend Developer — Aug 2023 - Dec 2023
Velz Travel — Remote

- Led a team to create a data science web app using Python Django, and Matlab for data analysis
- Supervised UI/UX designers on Figma designs whilst managing the developers
- Won multiple awards for the final delivery
- Initiated researched debates about global issues

Software Engineer (Placement Year) — July 2022 – July 2023
Johnson Controls R&D department (JCI) — London UK

- Administered legacy C/C++ projects whilst fixing bugs and adding new features
- Developed C# .NET library on serial data analysis generation for embedded system programs
- Designing analytics web dashboard with React JS and using TensorFlow for predictive AI
- Lead 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 a book library management system in C
- Designed Python NumPy, SciPy and Scikit-learn scripts for neural networks and data visualization
- Programmed PowerShell and bash automation scripts for system administration

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.

Education

BEng (Hons) in Electronics and Computer — Sept 2019 – June 2024
University of Leeds (UoL) — First-Class Honors

- Embedded systems, Microprocessors, FPGA, Electronics and Circuit Analysis
- Cloud and Parallel computing, Secure and Distributed systems, networking and Cybersecurity

Skills

C | C++ | Java | C# | HTML5 | CSS | JavaScript | Typescript | Dart | Python | Matlab | SQL | Bash | PowerShell | Verilog | Assembly | FPGA | Latex | Linux | Docker | Azure | AWS | IBM Cloud | Firebase | GCP | CI/CD | Jira | Git | SQLite | IBM Db2 | MongoDB | Postgres | .NET | WPF | React | Next.js | Tailwind CSS | Material UI | Chakra UI | Qt | Flutter | Django | Flask | Express.js | Springboot | NumPy | Matplotlib | SciPy | Pandas | Scikit-learn | TensorFlow | KerasRL | CMake | Make | Node.js | Office Suite | Arm Mbed | Arm Keil | Arduino | Simplicity Studio | Arduino | Intel Quartus | AutoCAD

Hard-working | Motivated | Deterministic | Leadership | Communication | Problem solver

Arabic (Full Professional) **English** (Full Professional) **Spanish** (Elementary)

Projects

JPS — Sep 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, analysis tools and serial communication protocols
- Communicated with engineers to get a feedback loop on the app's design and features

MCPP — Apr 2021 - Ongoing — Personal
- Created a cross-platform math library for C++
- Engineered with DevOps using Travis-CI, testing with GoogleTest and building with Docker Cmake
- Incorporated numerical algorithms revolving around matrix algebra, statistics and machine learning.
- Documented using Doxygen and MkDocs

NotePad — Nov 2021 - Ongoing — Personal
- Programmed a cross-platform note app with Flutter
- 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 — Jan 2021 - May 2021 — UoL
- Engineered circuits for I/O functionality using data sensors, potentiometers, buttons and resistors.
- Programmed control system for home appliances such as temperature, air conditioning and lighting
- Developed mini-OS using LCD display and joystick
- Operated on STM32 board, C++ on an ARM MCU

Professional Courses

Data Analysis with Python — Oct 2021
- 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 — 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
- Understanding different approaches to data science
- Looking at case studies regarding data collection and requirements

Tools for Data Science — Jul 2021
- Using Jupyter Notebook
- IBM tools such as IBM Watson Studio

What is Data Science? — Jun 2021
- Introduction to data science and big data
- Structure of data science reports

Matrix Algebra for Engineers — Nov 2020 - Jan 2021
- Basics of matrix algebra and properties of matrices

- Linear algebra and its use in statistical analysis

Extracurricular

Publications

References

Awards