Harith Al-Safi

Electronics and Computer Engineer

@ harith.alsafi@gmail.com +447444585915 London, UK Portfolio: https://harith-alsafi.github.io/
LinkedIn: https://www.linkedin.com/in/harith-al-safi GitHub: https://www.github.com/harith-alsafi

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

Software Engineer Intern (Placement Year)
Johnson Controls R&D department (JCI)

July 2022 – July 2023 London UK

- Administered ongoing C/C++ projects whilst fixing bugs and adding new features
- Restructured old CLI projects with modern GUI design using C#
- Directed a team on multiple C# libraries
- Managed few python projects
- Designing web apps with JavaScript frameworks in Tech challenges throughout the company

Hackathon Competition
Royal Holloway

Feb 2023 - 2 Days London UK

- Led a team to create an environment analytics web app using Python, and Matlab for data analysis
- Supervised UI/UX designers on Figma designs whilst implementing them in code.
- Won multiple awards for the final project

Software Developer Freelance
Paperound

Nov 2021 – Feb 2022 Leeds UK

- Developed a book library management system in C
- Designed Python NumPy, SciPy and Scikit-learn scripts for data analysis and visualization
- Programmed simple PowerShell automation scripts to ease up system administration

IT administration intern
Mesopotamia Group

Jun 2020 – Mar 2021 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 scripts with SSH tunneling and port forwarding
- Engineered another version using a network interface card and a network attached storage.

Education

B.Eng. in Electronics and Computer
University of Leeds

Sept 2020 – June 2024 Y1: 88%, Y2: 79%

- Engineering and Discrete Mathematics
- Cloud and Parallel computing
- Electronics and Circuit analysis
- Communications and Signals
- Networking and Cybersecurity
- User interface and Compiler Design
- Microprocessors and Embedded systems

Foundation in Engineering and Computing
University of Leeds (LISC)

Sept 2019 – June 2020 93%

- Advanced Physics and Math
- Autodesk AutoCAD

IB Science certificate
Cambridge High School

Sept 2017 – June 2019 40/42

- Physics and Math
- Languages and Economics

Primary School
Cambridge High School

Sept 2007 – June 2017

- Basic primary school

Skills

C | C++ | Python | Java | C# | JavaScript | Dart | CSS | HTML5 | SQL | Matlab | Bash | PowerShell | Verilog | Assembly | Latex

Hard-working | Motivated | Deterministic | Leadership | Communication

Languages

English ●●●●●

Arabic ●●●●●

Projects

JPS

Sep 2022 - Ongoing JCI

- Re-designed a serial data CLI project with C# WPF using MVVM and multithreaded design
- Communicated with engineers to develop the app's UI design as it will be used for UL and EN approvals
- Integrated SQLite database, Excel I/O features, analysis tools and serial protocols
- Invented a scripting language with access to run time memory and serial data within the app

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 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 using cloud authentication services with Firebase and storage with SQL CRUD
- Tested logic with unit testing and deployment on Android and web environments

Home Automation Embedded System

Jan 2021 - May 2021 University

- Engineered circuits for I/O functionality using data sensors, potentiometers, buttons and resistors.
- Programmed the ability to control home peripherals such as temperature, appliances
- Developed full UI/UX using LCD and peripherals
- Operated on STM32L476 board with C++ on Mbed

Tools and frameworks

Docker | Linux | Git | CI/CD | Microsoft Azure | IBM Cloud | Firebase | SQLite | IBM db2 | .NET | WPF | React | Qt | Flutter | NumPy | SciPy | Pandas | Scikit-learn | CMake | Office Suite | Arm Mbed OS | Arduino | Logism | Multism | Intel Quartus Prime | AutoCAD | Django | FPGA

Professional Courses

Data Analysis with Python

Oct 2021

- Performing data wrangling such as formatting and pre-processing
- Statistical correlation between datasets such as the Chi-Square for categorical variables
- Modelling data into linear and polynomial regressions
- Model deployment using regression pipelines
- Model training and evaluation

Databases and SQL for Data Science with Python

Sept 2021

- Relational database structure
- Advanced SQL syntax and its integration with python
- Using SQL to retrieve selective data from CSV files

Python for Data Science, AI & Development

Aug 2021

- Basics of Python and object oriented programming
- Quick summary of pandas and Numpy
- Viewing projects such as retrieving cryptocurrency data

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