## Harith Al-Safi

#### **Electronics and Computer Engineer**

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**Q** London, UK

Portfolio: https://harith-alsafi.github.io/ 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**

Mov 2021 - Feb 2022

- **Q** 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**

- 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)

- Advanced Physics and Math
- Autodesk AutoCAD

### **IB** Science certificate **Cambridge High School**

Mark Sept 2017 - June 2019

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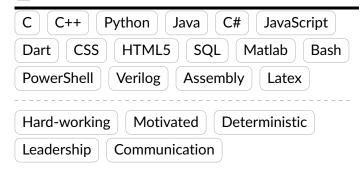
- Physics and Math
- Languages and Economics

## **Primary School Cambridge High School**

## Sept 2007 - June 2017

Basic primary school

## 🛂 Skills



## Languages

**English** 



**Arabic** 





#### **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

- 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

- 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



## 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, Al & 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

- Mov 2020 Jan 2021
- Basics of matrix algebra and properties of matrices
- Linear algebra and its use in statistical analysis