

William Sullivan

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Experience

SOFTWARE DEVELOPER

📅 September 2021 - November 2022

DATAHORIZON

📍 Tewkesbury, UK

- Developed, tested, and implemented code for multiple applications and their required web services.
- Assisted in the design and maintenance of associated databases.
- I was part of two projects before the company closed.
- *NPMS Project (Nigerian National Oil Production Monitoring System):*
 - Enhanced functionality of a **Windows Forms** application utilizing **DevExpress** components and written in **C#**.
 - Leveraged **SQL** to access an **Oracle** Database on a local computer.
 - Implemented new reports generated using **DevExpress**, based on the acquired data. Providing department heads insight into data.
- *Anaconda Project (Data Collection and Monitoring System):*
 - Refactored significant portions of the **WPF** application to adhere to the MVVM pattern using **.NET** Core 6. Improving the maintainability of the software. Then started development of a **MAUI** application for Android with these ViewModels.
 - Adapted a custom graphing control to utilise **SkiaSharp** for enhanced data visualisation.
 - Established a **WCF** service to facilitate remote data access from a Microsoft **SQL** Server Database.

TEMPORARY ADMINISTRATOR

📅 August 2020 - April 2021

MYPOWER UK

📍 Toddington, UK

- Primarily responsible for file collation, creating comprehensive handover packs for clients, with information about their solar panel installations.
- Developed a **Python** script during personal time to streamline the collation process and improve efficiency.
- Started the development of an application using **C#** to replace the Python script, adding a user-friendly UI, allowing for other users.
- Used Excel spreadsheets to analyse data, calculating expected returns from installing batteries in conjunction with solar panels.

University Projects

NEURAL NETWORKS FOR CATEGORISING NANOPARTICLES

FINAL PROJECT

- My final project was to demonstrate the feasibility of employing Neural Networks for the rapid categorisation of Nanoparticles from their Scanning Transmission Electron Microscope (STEM) images.
- Used **Python** to generate nanoparticles with diverse characteristics and create intensity graphs representing cross-sections through them, simulating STEM images for training purposes.
- Trained Neural Networks using **Keras** with **TensorFlow** on the generated STEM images to determine the viability of the categorisation process.

SWINGING NAO ROBOT

GROUP STUDY

- Collaborated as a member of a 14-person group to optimise the swing of a NAO robot, aiming to achieve the highest possible swing height.
- Contributed to the machine learning subgroup, taking the lead in developing a **Neural Network** from scratch using **Python**.
- Trained the Network in a simulated environment using a genetic algorithm.

About

- Software Developer with a Master's degree in Physics and one year of industry experience. Skilled in C# with a passion for creating efficient, user-friendly software.
- Committed to continuous learning and eager to contribute to larger projects.
- I am currently in Canada with an open work permit and looking to leverage my software development skills and learn from a diverse and collaborative team.

Skills

PROGRAM LANGUAGES

C# • Python • XAML • SQL • HTML • CSS

APIS/Frameworks

.NET • WPF • Xamarin • MAUI • Windows Forms • WCF • Blazor

SOFTWARE & TOOLS

Visual Studio • git • \LaTeX

MISCELLANEOUS

- Strong background in Physics and Mathematics, I am good at **problem solving** and **analytical thinking**.
- Comprehension of technical concepts, I understand complex information and its applications.
- High numerical literacy, I am adept at handling data and performing **data analysis** effectively.

Education

UNIVERSITY OF BIRMINGHAM

📅 Oct 2016 - Jun 2020 📍 Birmingham, UK

MSCI PHYSICS WITH HONOURS

CLASS II (DIVISION I)

GPA: 3.5 Final Percentage: 65.97

SIR THOMAS RICH'S SCHOOL

📅 Sep 2011 - Jun 2016 📍 Gloucester, UK

A LEVELS

- | | |
|------------------------|----|
| • Maths | A* |
| • Further Maths | A |
| • Physics | A |
| • Chemistry | B |
| • Economics (AS level) | B |

GCSEs

- 12 GCSEs, 6 A*s, 5 As and 1 B
- A*: English Literature, Geology
- A: Design Technology, Geography