SAMUEL FELTON

A Computer Science student at the University of Sheffield passionate about intelligent web apps, detailed solutions to complex problems and learning from experienced professionals.

Personal Information

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Programming Experience

Python	**Ruby & Ruby on Rails**
3 Years	*2 Years*
Javascript	**VBScript & ASP**
3 Years	*2 Years*
Haskell	**Java**
2 Years	*1 Year*

Education

University of Sheffield – MCOMP Computer Science

September 2019 - 2023 (Estimated)

Dissertation: Identifying Potentially Idiomatic Expressions

Compared a state-of-the-art **transformer based language model** to an expert knowledge based model for **identifying idiomatic phrases** to evaluate their ability to represent idiomatic language.

Progressive Web App

Built a progressive web app to demonstrate understanding of **jQuery, socket.io** and **MongoDB** with a team of developers.

Modelling disease spread in rabbit populations

Developed an **agent based model** using **python** to simulate the consequences of rabbit culling during a myxomatosis outbreak.

Wrote a report analysing variations in initial population size, mortality rates and methods of tactical culling and its effect on population stability **with a group of researchers**.

Sentiment analysis of online film reviews

Used **python** and **lexical analysis** to assess the performance of different methods of preprocessing when **classifying** film review sentiment.

Work Experience

University of Sheffield - PGR Progression Monitoring System Developer

July 2021 - Present

Post Graduate Report System

Used **Ruby on Rails** and **agile development** to design, develop, and deploy a comprehensive **form creation and distribution website** to monitor PhD students and academic supervisors.

This service is used by many departments within the University of Sheffield engineering faculty, and is currently being **expanded across the entire university**.

SystemServe - Part-Time Web Developer

July 2019 - Present

Google Maps Webpage

Worked with a small team to design and develop mapping software on the **Google Maps API Platform.**

Developed an algorithm in **JavaScript** to appropriately present densely clustered map markers to make the maps more legible.

Graphical Representation of Webpage

Wrote and implemented a recursive algorithm to convert XDT expressions of data structures into graphical representations using **JavaScript.**

created a structure for ordering and recursively defining these structures, so PNGs of common data structure shapes can be saved and easily accessed when needed.

Diocese of Winchester Inventory Database

Translated a large inventory dataset from a flat-file database into a custom **SQL Server relational database.**

Developed an import routine with **VBScript** and **SQL queries** to transfer five years of data into the new database.

Global Engineering Challenge

Collaborated with a group of engineering students to develop a mock design for a **mobile application** for disease spread monitoring.

Presented this application to 3 professionals and was **awarded** “Best Communicated Solution” and “The Dr Trish Murray Professional Behaviours Team Award”.

Offline Webpage Research and Development

R&D into offline webpages, and constructed pages to demonstrate the capabilities of **service workers** in **JavaScript**.

Taught other employees how to implement these features into their own pages.

Diocese of Salisbury Automated Application System

Designed and built HTML forms for the application, vetting, and approval of new school governors, for the diocese of Salisbury.

Colchester Sixth Form College
September 2017 - June 2019

A-Level Computer Science: A

A-Level Electronics: A*

A-Level Mathematics: A

Philip Morant School and College
September 2012 - June 2017

12 GCSEs from A*-C including Grade 8 in Mathematics and Grade 7 in English Language.

University of Sheffield - Student Demonstrator
September 2021 - December 2021

Assisted 2nd year computer science students in their **Haskell** programming assignment.

Provided insight and **experience** with the **Haskell** programming language to help students find logical and syntactical errors in their code.

Colchester Sixth Form College - Part-time Electronics Technician
October 2018 - June 2019

Repaired broken PC-microchip interface devices.

Taught first-year electronics students how to properly use the department’s facilities.

Restocked the department with the necessary components for the student’s end of year engineering projects.

Extracurricular Activities

Computer Science Society Secretary
2022

Elected to co-ordinate meetings, manage emails and organise society events for the Sheffield Computer Science Society

National Citizenship Service
2017

Worked with a group of young adults to help renovate a local scout hut and rebuild their campfire facilities.

Rockscool Grade 6: Electric Guitar
2017

Trinity College London Grade 5: Drum Kit
2015

Personal Projects

Wordle Solver
2021

Used **python** to build a script to solve riddles on the NYTimes website Wordle by applying knowledge of **Regular Expressions**.

Arduino
2019

Designed and built a miniature arcade machine using **Arduino** and the **Adafruit_NeoMatrix** Library.

P5.js
2018

Developed many games and personal projects using **JavaScript**, **HTML** and the **P5.js** graphics library.

Personal Qualities

Focused on establishing strong relationships with team members.

Passionate about deep, engaging conversation.

Excited to discuss alternative opinions and perspectives

Enthusiastic about board games.