Ali Al Temimi

ali@altemimi.xyz
07930408174
LinkedIn

Experience

Research Intern - University of Hull - Hull (AUGUST 2022 - NOVEMBER 2022)

KEY RESPONSIBILITIES:

- Design and develop custom Python software for our in-house-built hybrid 3D printer for printing electronic and plastic parts.
- Created and maintained development documentation to support ongoing software development post-internship.
- Plan new features to be developed using agile development.
- Allocate minor tasks to such as small bug fixes and simple experiments to junior staff and interns.

KEY ACHIEVEMENTS:

- Expanded the initial project's scope by developing custom Python software for gcode manipulation.
- Drastically reduced preparation time for custom gcode files for conductive ink and plastic printing.
- Reduce the error rate and streamline the process of embedding custom electronic tracks into printed parts.
- Helped increase the possible complexity of possible devices that can be created.

Junior Software Engineer - Global View Systems - Hull (OCTOBER 2021 - MARCH 2022)

KEY RESPONSIBILITIES:

- Designed, developed, and maintained responsive front-end features for key software using Blazor WebAssembly.
- Developed and optimized back-end solutions, including data migrations and schema design, using Entity Framework and .NET Core to enhance data management efficiency.
- Used .NET to develop new features for our new auditing software that is targeted to the NHS hospitals.
- Used .NET MCV to develop and maintain features for our more mature porter software targeted at NHS hospitals. Including working with radio integration to the software (Motorola, Hytera)

KEY ACHIEVEMENTS:

- Implemented a full-stack employee sign-in system for fire safety in the office. Including a dynamic backend to accommodate future hires and a front end using the Blazor UI framework MudBlazor.
- Rebuilt key features to improve user functionality by streamlining the key activity.
- Implemented new time-tracking features allowing management to streamline audit allocation and keep track of upcoming audits including yearly audits such as efficacy audits.

Current Education

University of Hull - MSc Research Masters in Physics (Nanoelectronics) (JANUARY 2023 - JANUARY 2025)

- Expanded the scope of the initial software tool created during my internship to include the creation of custom gcode.
- Developed a 2D line-by-line simulated gcode visualiser with the help of DearPyGui.
- Implement a feature set that enables seamless operation of the 3D printing, allowing the user to start printing and having the printer automatically print both ink and plastic with little user input or overhead.
- Conducted hands-on testing of the software with the printer including both conductive ink and plastic printing.
- Developed a feature enabling the integration of any gcode file with various infill settings for compatibility with our custom hybrid 3D printer.
- Maintain and test the custom 3D printer, including designing custom inserts and addons in CAD and manufacturing them for better print quality.

Projects

EEG Controlled Prosthetic

Used Python to develop software that can control a 3D printed prosthetic by reading real-time brain data. The software mimics an EEG brain-reading device and outputs the data similarly to what an EEG device would. The other part of the software reads in the data with the help of Sockets; the software then processes it into a graph using Matplotlib.

Efficent STL Searching Tool

I am currently working on a web-based STL searching tool that will allow users to search through archive file formats such as .zip or .7z. The tool consists of 2 components, a searching, and a viewing component. The viewer is a full 3D viewing system like CAD or 3D printing slicer software, allowing the user to view each STL file in 3D space. The tool is written in React.js and three.js. Currently in the optimisation phase of development.

Skills

Programming Languages
C - C++ - C# - Python - JavaScript - HTML - CSS

Frameworks
.NET Core - Entity Framework - Blazor - React - Node.js

Tools
Blazor WebAssembly - Three.js - OpenGL - SFML - Git - Jira - jQuery - Bootstrap - Arduino - DearPyGui - Fusion 360 - Blender - Adobe CC - Ultimaker Cura - Numpy - Matplotlib - CAD

Experimental Skills
3D Printing - Chemical Cleaning - General Electronics - Microscopic Photography - Profilometer

Languages
English - Arabic - Swedish

Education

University of Hull - First-Class Honours - BSc Computer Science (SEPTEMBER 2018 - MAY 2021)

- Advanced Programming - Worked on more advanced software features within object-oriented languages. Used C++ to understand how the language accesses memory, works with pointers, and does code analysing and testing with tools such as Parasoft (93%).
- Artificial Intelligence - Developed Genetic Algorithm for an existing Neural Network in C# (72%).
- System Analysis, Design and Process - Group project to design and develop a piece of software and go through the whole software development process using the Agile methodology (71%).
- Agile Software Development - Developed a Forum website in a group using SCRUM and the Agile methodology. (70%).
- Electronics and Interfacing - Developed an assortment of small software for an Arduino microcontroller (69%).
- Object-Oriented Programming - Created the game "Uno" in C# using object-oriented design and methodologies (60%).

Hull College - Distinction* Distinction Distinction - Level 3 Extended Certificate in IT (SEPTEMBER 2016 - JUNE 2018)

- Database Development - Worked in a team to design and develop a database for a movie booking website in Microsoft Access
- Computer Games Design - Design and develop a 2D platformer game for the Unity Game Engine, including creating design documentations and game guide.
- Organisational Systems Security - Design security measures for a given computer system for a mid-sized business.

Teaching

Labratory Demonstrator - University of Hull Department of Physics - Hull (SEPTEMBER 2023 - MAY 2022)

KEY RESPONSIBILITIES:
- Help students with their experimental methodology, data analysis and Arduino scripts.
- Guided students with developing their analytical thinking skills, team working skills and lab skills.
- Ensured students were compliant with lab safety by having them set up and follow lab risk assessments.
- Marked and provided feedback for students and their assignments.

Volunteering

Smash Crab Studios (SEPTEMBER 2015 - DECEMBER 2015)

- Was introduced to the Unity Game Engine and basic game development principles.
- Worked in a team to design abilities for a mobile game.
- Introduced to basic Git commands and source control principles.
- Practiced Leadership skills by leading a small team to create our unique take on the game snake with more realistic movements in the Unity Game Engine.

Fantasticon (OCTOBER 2016)

- Used customer-facing skills to help attendees to the event by leading them to specific activities and helping them participate in said activities.
- Worked in a team to set up a nerf arena
- Helped set up the IT system for the event including a VR play area and a retro gaming area.