## Header

**Hi there, I'm Joe. I love creating digital experiences and exploring how technology can help tackle global challenges.**

Hi, I’m Joe! With a background in both computing and sustainability, I’m focused on combining these passions to build meaningful solutions. Whether it’s designing user-friendly applications or contributing to projects that reduce environmental impact, I’m driven by the potential of technology to make a positive difference. My goal is to create digital tools that support a more sustainable and equitable world for everyone.

# Experience

Smart-H:

For my dissertation, I collaborated with Smart-H to examine the public health impacts of urban air pollution and the role of smart city technologies in mitigating these risks. My project assessed the health impact of Smart-H’s HydroDrive, utilising advanced air pollution dispersion modelling and urban data analysis. I communicated findings effectively to both technical and non-technical stakeholders, providing recommendations for integrating smart city technologies to enhance urban sustainability.

MSc

My lifelong passion for the environment and desire to use my computing skills for real world positive change encouraged me to complete a masters in Sustainability at the University of Exeter. As one of the leading universities for climate action, the course provided me with opportunities to learn from some of the world’s top climate change researchers. Content covered all aspects of the necessary, but monumental societal transition that must take place in order to preserve the earth. With a strong focus on real-world applications, the programme provided me practical tools for addressing sustainability challenges through skills like systems thinking, providing me

Over the summer, I participated in a Turing Traineeship placement in Computing at the University of Adelaide, Australia. During this time, I completed a course in Virtual Reality Design and Development, where I acquired new skills in 3D modeling and VR application development. This experience allowed me to deepen my technical expertise and gain hands-on experience with cutting-edge VR technologies.

Bath Spa:

I completed my undergraduate degree in Computing graduating with first class grade in 2023. During this time my interest in programming, specifically web and app development grew. I honed my skills in various aspects of this field including JavaScript, HTML/CSS, C++, Database design and API integration. During my time at Bath Spa I also carried out a Erasmus semester abroad in Barcelona, providinng me with new perspectives and greater experience.

**Victrex Project:**

During my time at Edgemethods, a Microsoft partner, I was responsible for creating an engaging dashboard to display a live data stream from industrial IoT (IIoT) sensors on the factory floor of a leading British plastics engineering company. The project aimed to deliver a platform that could support real-time decision-making by executives as part of their carbon emissions reduction strategy.

The sensor data from the factory was accessed through an API initially developed by Edgemethods. I used Node.js to develop a web-based application that dynamically retrieved this data and displayed it on a user-friendly webpage accessible to key stakeholders. Leveraging my web design skills, I crafted an intuitive and visually engaging front end with colours and animations to signal factory process efficiency.

The final product received positive feedback from both Edgemethods and the client. Its accessibility and dynamic features led the client to request an expansion of the IIoT project, with an increased focus on interactive data dashboards.

**F1 App**

My interest and passion for motorsports led me to create a website to view F1 historical data and events in an innovative manner. I decided to complete this project in my own time as a way of learning how to integrate an REST API to dynamically update content on a webpage using JavaScript.

The main feature of the site is the integration of MapBox into the way race results, past and present, are shown. Each event has a marker placed on an interactive custom globe created on MapBox and integrated into the site, making it a more visually engaging experince. As an event is clicked on the race data is loaded from an F1 historical data library delivered as a Rest API.

Island VR

Island Hopper is a Virtual Reality experience developed during my time at the University of Adeliade’s Realities Extended Unit. Developed in Unity 3D, the game offers an immersive and fun take on speeding around an archipelago of tropical islands on a powerboat.

Floating on a custom water shader and physics system players must navigate a course of checkpoints in the fastest time possible. Using blender to create the required assets allowed me to be creative with the artstyle and create a simple yet beautiful set of islandscapes to explore. Complimented with an immersive soundscape and lighting system players will be virtually transported to the open ocean and maybe even feel every wave and bump in the ocean.