Elliot Michael Buckingham

elliot.m.buckingham@gmail.com

linkedin.com/in/elliotmb • elliotmb.dev • github.com/elliot-mb

About me

High-achieving University of Bristol Computer Science student with aspirations as a developer; eager to learn more about and engage in FE/BE/full-stack web and/or software development. Currently looking to expand my knowledge and practical skills through an internship during the summer of 2023.

Education

University of Bristol

2021 – 2024

BSc Computer Science

First Year – First Class
Term 1: Mathematics A: 83%, Imperative & Functional Programming: 75%, Computer Architecture: 73%
Term 2: OOP & Algorithms: 84%, Mathematics B: 86%

University Technical College Norfolk

2019 – 2021

A Levels – 3A*s (Mathematics, Computer Science, Physics)
Cambridge Technical – Distinction (Engineering)

Aylsham High School

2014 – 2019

GCSEs – two 9s (including Physics), five 8s (including Computer Science, Maths, English Language and Literature), A (Further Maths), 7, 6, B

Skills and Proficiencies

Test-Driven Development, C, CLion, Java, JavaScript, HTML, CSS, React, JSX, NPM, Git, GitHub, Apache Maven, IntelliJ, Unix – Linux, VirtualBox, Vim, Algorithmic Analysis, Self-Improvement, Teamwork and Communication.

Experience, Projects, and Coursework

Object Oriented Programming Final Coursework

March – May 2022

- Over 60 hours of face-to-face pair programming saw us produce both an implementation of the boardgame Scotland Yard, and an "exemplary" AI which was "agonisingly close to near-unbeatable".
- Sharpened my Object-Oriented thinking, planning, and programming skills.
- Developed my teamworking ability; practised clearly communicating my ideas to my teammate and carefully listening to theirs.
- Produced a recursive Minimax algorithm with weighted static evaluation.
- Utilised test-driven development through creating assertion-based test cases.

Portfolio Website

July 2022

- Set up a React project via NPM and produced my own component-driven portfolio website from scratch.
- Learnt how to work with React, JSX, API calls, and functional components.
- Created my own re-usable JSON-driven components, parsing data to generate page content. This allowed for easy modification and addition of content to the page with minimal effort.
- Interacts with the GitHub API within a React component. This is done to fetch information about the projects featured on the website.
- Hosting on GitHub Pages, I purchased a custom domain. Having set up the required DNS rules, the Pages URL and subdomain (www.elliotmb.dev) resolve to my custom apex domain (elliotmb.dev).

Playlist Puller (Spotify, Invidious and YouTube APIs) June 2022

- Reads playlists off an authenticated Spotify account and recreates them as YouTube playlists.
- Familiarised myself with making and handling Spotify, YouTube, and Invidious API calls.
- Used Python libraries including Spotipy and Requests, and Google's libraries for OAuth etc.
- Plan to work towards turning this into a full web app, with a rewritten script acting as an API backend which an otherwise static page will make calls to. I will migrate away from Google Cloud.

Imperative Programming Final Coursework December 2021

- Designed and implemented a solution for converting between different image formats in C.
- Developed bespoke compression for course-defined vector format (based on rectangle-inscription).
- Test-driven development.

Computer Science Society Game Jam 2021 October 2021

- Led a team of 3 which worked to create a Halloween themed game in 24 hours.
- Programmed a 2D object-oriented physics and collision engine in JavaScript with mechanics like a player, smooth camera, damage, and enemies. Accommodated and complemented teammate's work.
- Clearly outlined and delegated tasks to other members of the team.

Pseudo-3D Raytracing August 2021

- Personal project in JavaScript which has the player navigate a pseudo-3D maze (generated using my implementation of a Randomized Depth-First search algorithm).
- Programmed my own sphere tracing algorithm and pure geometry. Learnt low-level graphical rendering methods and gained experience optimising rendering calculations.
- Implemented performant/costless "lighting" effects by exploiting elements of sphere tracing.

Aviva Digital – Shadowing June 2018

- Shadowed employees from all departments including front and back-end development, and UI design.
- Learnt how the industry uses AWS/cloud integration for data analysis and storage.
- Immersed in Rapid Application Development; attended a scrum and was given a comprehensive explanation of how Git and GitHub streamline collaborative software development.

Employment, Accolades and Achievements

Sales Assistant at Mountain Warehouse June 2022 – September 2022

- Worked as an integral part of a highly functional and energised team delivering excellent customer service at Mountain Warehouse.
- Developed my interpersonal skills, gained great confidence in conversing with/helping with customer queries in a new and challenging environment.
- Able to adapt my service approach depending on the individual, took pride in my work and always accepted extra hours when they were asked of me.

The Scholars Programme 2020

- Completed a course involving writing many essays on a subject taught at university level by a University of Cambridge PhD student.
- Grade of final cumulative essay: 2:1.

National Citizen Service June – July 2019

- Two-week Social Action Project as part of a team of 6 other teens with the aim of improving the local community.
- Volunteering and fundraising for the local charity. Volunteering included site clearing.
- Organised and ran a pub quiz for the village, serving as one of our fundraisers.