Elliot Michael Buckingham +447848857577 elliot.m.buckingham@gmail.com

linkedin.com/in/elliot-buckingham-1a595a19a • elliot-mb.github.io • 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, Java, JavaScript, C, C#, Haskell, HTML, CSS, Git, GitHub, Apache Maven, IntelliJ, CLion, 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.

Playlist Puller (Spotify, Invidious and YouTube APIs) June 2021

- Produced a Python script to read playlists from an authenticated Spotify account and re-build them as a new YouTube playlist.
- Familiarised myself with making and handling Spotify, YouTube, and Invidious REST API calls.
- Used Python libraries including Spotipy and Requests, and Google's libraries for OAuth etc.
- Working 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.

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.

Project Euler Solutions — July – Sept 2021

- Came up with solutions for public mathematical programming problems in different languages (notably C#).
- Focussed on readability, elegance, and efficiency; making sure to completely understand the best community solution.
- Practised calculating time complexity, led to me implementing a prime-number-finding per-core CPU benchmark.

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.

Awards, Accolades and Achievements

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.

D of E Bronze — 2018

- Completed an expedition, improved a skill, worked on my physical fitness, and chose to complete my volunteering in my local library for three months.
- Worked with members of staff and handled customer requests. Was polite, cooperative, and helpful.
- Dedicated myself to improving at drawing over the course of 6 months through regular practise.
- Improved physical fitness and resilience by pushing myself to cycle further.