James Alexander Goodman
Brighton, Sussex
Phone: 07985 494587 | E-mail: jagoodmail@gmail.com
Personal Portfolio: https://jgoodhub.github.io/

Personal Summary

Enthusiastic and driven graduate programmer with in-depth knowledge attaining to the core principles of programming both well documented and reusable code, in Object Orientated languages. An avid games enthusiast who enjoys the challenge of creating new features and systems and is always eager to learn new skills and techniques that I can use to further improve my programming abilities.

Skills

- Ability to program in Object Oriented languages C#, Java and C++.
- Experience in the Unity3D engine, Blender/3DS Max modelling and Final Cut/Premiere Pro video editing.
- Knowledge of HTML, CSS and JavaScript.

Personal Projects

- **Heroes Quest** - A Dungeons & Dragons inspired Role-Playing Game
  - Turn-based RPG that was undertaken as my final year dissertation, created in the Unity engine with C#.
  - Involved the creation of world generation algorithms, navigation of graph data structures using A* pathfinding and enemy control using dynamic artificial intelligence.
  - Highlighted each stage of the software development cycle from background research and designing a specification to iteratively developing features and conducting a user evaluation of the product.

- **3D Ray-trace Rendering Engine** - A rendering engine for drawing primitive shapes to a window
  - Used as a practical to understand the inner workings of industry standard rendering engines.
  - Built from a component-based system for ease of use and expandability for future features.
  - Developed my understanding of vector mathematics for use in ray-casting and positioning applications.
  - Java was used to develop the ray-casting system, which is used to draw the scene to a JavaFX window.

- **PIP Player** - A “Play in Picture” application for overlaying YouTube videos to the screen
  - Application created to watch Youtube programming tutorials in an “Always on top” window design.
  - Used to solve the issue of screen real estate when following tutorials on a single monitor setup as the player can overlay the IDE allowing for the user to code alongside the tutorial.
  - Java was used to extract the data from the input URL and parsed to the JavaFX WebView API for display to the window.

Experience

- **Harpenden Library** - Technical Advisor (*IT Champion Program*)
  - Weekly volunteering placement in the IT section of my local library.
  - Tasked with assisting customers with any technical queries they may have, this covered a wide scope of topics ranging from aiding in the installation and setup of software to walk-throughs of features offered by library systems and smart devices.
  - The placement built upon my communication skills and ability to break down a technical problem into sub-problems and devise solutions that a non-technical user could understand and follow.

- **Ensoft Networking** - Work Experience Placement
  - 3-week work experience placement at a Harpenden based networking and software development company Ensoft.
  - Observed the range of skills and attitudes required for working at a software development company, including methods for increasing team productivity such as group presentations, constructive feedback and weekly updates of current assignments.
  - My work there consisted of taking staff centric data, e.g. lines of code written, and converting them to visual graphs and charts using Python for display on the building’s many TVs.

Education

2015 – 2019 University of Sussex - (BSc Hons) Games and Multimedia Environments (Achieved 2:1)

Further Programming - Grade 69%

- Core programming concepts consisting of inheritance, polymorphism and code encapsulation.
- Model, View, Controller design principle and the inbuilt GUI libraries offered by JavaFX.

Programming Concepts - Grade 90%

- Efficiency of algorithms and analysis of their best- and worst-case runtime complexities.
- Situations where they may be used and their pseudo-code definitions for use in a variety of languages.

3D Modelling and Rendering - Grade 70%

- Fundamentals of how geometry is created, textured and rendered using the modelling software 3DS Max.
- Encompassed how vectors and matrixs are used to transform 3D geometry to more efficient structures.
- Covered how 3D geometry is passed down and processed at each stage of the core rendering pipeline to be displayed on the screen.

Software Engineering - Grade 62%

- Production of large-scale software and its lifecycle after deployment using agile development.
- Worked as part of a team to create an application to a design specification document provided to us, this meant questioning the client on ambiguous points, use of version control software Git-Hub, and emphasis on code documentation to mimic a real-world scenario.

Human Computer Interaction - Grade 76%

- The user research, iterative design, and eventual evaluation of a prototype app using User-Centred Design.
- The analysis and use of a range of research methods and the advantages/disadvantages linked to each in the field.

Global Design Challenge

- Week-long team building exercise, involved finding a solution to issues faced by the 'Engineers Without Borders' charity group.
- Worked to understand the problem, then devise practical solutions with strategies for deployment and in field maintenance.
- Developed my team building skills and improved my ability to manage my time while still helping others with their own responsibilities.

2008 – 2015 Sir John Lawes Secondary School, Harpenden

Media Level 3 BTEC Diploma - Distinction*, Distinction, Distinction

- Experience in industry level camera equipment and editing software to produce engaging short videos to a specific design brief.
    - Multi-Camera production involved the creation of a live news broadcast as a team.
    - Drew on my ability to plan, structure and present the various news stories provided to us.
    - As floor manager I lead the camera operators and guest presenter in their own roles. Dictating when a cameras position should be changed or when a presenter needed to enter or leave the set.

AS-Level Computing - Grade B

- Fundamentals of coding and the growing role of software development in the technology industry.
- Focus on the core variable types and method declarations shared across multiple languages, encapsulation of code into "write once run many" functions.
- How data is transmitted and routed from one system to another through each layer of the internet.

G.C.S.E - 6 GCSE's, including A's in Mathematics and Science, and a C in English.