Joseph Greaney

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Profile

A forward-thinking MSc. Computer Science student, with established organisational and professional skills. Strong team ethos and analytical ability, who enjoys the challenge of work. Developed & proven communication and interpersonal skills. Keen interest in virtual and augmented reality applications and remote operations.

Technical Skills

Source Control / Git	C#
HoloLens, Vive and Oculus Touch development	Unity and Source 2
Scientific and statistical visualisation	.NET sockets
Object-oriented programming	C++ and DirectX11
VR, AR and MR deployment	Python with Machine Learning
3D Asset Design and Photogrammetry	3DS Max and Blender

Education

BSC Computer Science: First Class with Honours, University of Hull — September 2016 – July 2020

Completed functional software assignments, demonstrating capability towards independent study and understanding new and radical development concepts. Communicated effectively via written reports and group scrum meetings, and adapted to remote working by adopting agile development strategies.
Focused on research and development for head-mounted displays, improving team workflows by leading when necessary, whilst developing room-scale simulations with facilities for remote control. Managed long-term schedules for multiple concurrent deliverables, learning to effectively use iterative development strategies to progress. Used subversion management via Git to maintain changelogs, track task completion and gauge progress throughout.

Modules

Third Year: Virtual Environments, Advanced Software Engineering, Visualization, Data Mining and Decision Systems.
Second Year: Electronics and Interfacing, Database Techniques, Systems Analysis Design and Process,
Artificial Intelligence, Advanced Programming, Networking and User Interface Design.

Virtual Environments - Managed a group project developing software for the HoloLens platform, using Unity with C# scripting to enable remote operation and calibration. Developed a 360-degree video player for the Oculus Rift, with diegetic user interfaces, and focus-activated displays.

Research Project (Virtual Environments and Dexterity) - Planned and documented a research project for evaluating spatial distortion effects in virtual reality, which incorporated a virtual testing environment to be deployed on the Oculus Rift Touch platform, using Unity with C#. Developed custom assets using 3DS Max and Blender. Successfully implemented environments captured using photogrammetry, automatically generated experimental metrics, hand-dependent controller inputs and remotely configurable avatar user representation.

Visualisation - Used Git source control, D3.JS and Paraview to create and evaluate scalable, multi-dimensional abstract visualisation objects for engineering and financial data sets. Produced interactive radar charts and OHLC stock graphs, for implementation in a front-end oriented web environment.

Advanced Programming - Produced a wordsearch solver using C++, with process threading, pointers, references, linked lists, and efficiency instrumentation.

MSC Computer Science for Games Development, University of Hull — September 2020 – September 2021

Practised efficiency-oriented approaches to produce C++ and DirectX practical assignments, using GitHub for synchronising workflows around online code repositories, allowing for development from home. Repurposed C# software using Monogame libraries as part of an agile development team, using scrum frameworks and online Kanban tools to synchronise across a sprint-centric workflow. Used Git-based branching and pull requests to develop as a team.

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Relevant Experience

Laboratory Assistant: University of Hull, Faculty of Science & Engineering **February 2018 – Present**

Assisted with preparation and fulfilment of practical lab sessions. Educated second and third year students in a variety of paradigms, including Unity with C# scripting, Hololens 2 and Vive Pro deployment, Javascript and XML integration, and Git repository systems. Guided students through laboratory assignments, helping them build spherical surround video viewing software. Assisted second year students in managing team projects for system specification and functionality implementation, whilst developing contemporary ethical understanding with respect to data handling. Monitored and assessed student progress on behalf of Lecturers, and guided many to success.

Projects and Interests

Creative Asset Design **September 2017 – July 2019**

Produced poster graphic, three-dimensional model and merchandise designs for University societies and student union election campaigns in Hull and York. Developed virtual environments for the Janus VR platform, using Source 2 and Unity.