Joseph Greaney

Mobile: +447930 348605
Email: joegreaney98@yahoo.com
Website: joe-v2.github.io

Profile

A forward-thinking C# and Python developer, with an appetite for progression and great ambitions. Established organisational and professional skills as a department leader, with a reputation for transparency, insightfulness, and robust, dependable implementations. Strong team ethos and analytical ability, with a love for challenging work and effective solutions. Proven communication and interpersonal skills. Keen interest in machine learning, virtual and augmented reality applications, data-driven autonomous systems, remote operations, logical problems, and researching new things.

Technical Skills

C#, JavaScript and Python
Git CLI Subversion Management and Bash Automation
AWS, Google Cloud, Waitress and ASP.NET API Integrations
UX and UI Design via CSS, WinAPI and Unity UI Elements
Agile and Scrum Framework Integration and Leadership
Continuous Integrations and Deployment Management

PyTorch, CUDA and Concurrent System Design
Software Diagnostics and Prognosis
Unity Engine and Editor Scripting
Pipeline Monitoring and Automation
Jira, Bitbucket and Confluence
Blender, Photoshop and Procreate

Relevant Experience

Lead Developer: Core Software Stack, Immersive Reality **May 2023 – Present**

Owning and expanding upon a core technology stack, from within a central system working within ASP.NET and Python, and out towards data-driven presentation layers powered by UWP and Unity, with manual and automatic control integrations for the proprietary localised IoT platform "IRiS". Scheduling and authoring greenfield multi-threaded HPC/GPU applications for data relationship inference and point prediction, using LSTMs and Transformers via PyTorch with Concurrent scheduling and CUDA, on Google cloud-based and locally networked platforms. Building scalable and dynamic web-interfacing systems, to accelerate bespoke developments for information-oriented therapeutic and educational applications. Liaising and coordinating external service providers, executing cloud-based resource management, and software deployment on a global scale. Communicating complex technical concepts and development objectives directly to CEO, CTO and clients alike – leading on improvements regarding company-wide project progression visibility, effective planning for more collaborative business strategies, and both long and short-term staff management structuring.

3D Developer / Kanban Team Leader: Planner Development, Wren Kitchens **April 2022 – May 2023**

Managed deployments, and continuous integration of developed software features, into a multi-platform codebase via Jenkins pipelines, while maintaining visibility via Jira coordination. Improved user experiences on an international scale, as software built and was shipped to showrooms throughout the UK and USA automatically. Built scalable features across technical and creative disciplines, using C# with Unity scripting and S3-based asset bundle management for external resources. Scoped projects designed for scale, pursuing the legal protection of patent applications and accredited inventorship for AI-powered customer journey improvement projects. Spearheaded a team of two developers and three QA testers, integrating Agile and Scrum principles within an itemised Kanban workflow. Trained and onboarded new members into standard process, assisting skill growth and domain knowledge transfer within staff, to create production-ready feature developers.

Junior 3D Developer: Planner Development, Wren Kitchens **June 2021 – April 2022**

Produced continuous, project-focused and business-centric feature implementations and bug fixes for external product owners. Gave routine live demonstrations within Scrum ceremonies to key stakeholders, using C# with Unity and AWS. Worked as part of a five-person development team, synchronising with Git CLI, and using Jira for prioritised issue management. Interfaced with artists to provide development tooling, to increase efficiency and reduce project dependency bottlenecks. Developed testing routines for internal Quality Assurance, and assisted with improving internal diagnostic practices. Delivered retail-ready features, across Mac, Windows, HTC VR and distributed EC2 rendering platforms, as a part of projects with business values in the millions.

Laboratory Assistant: University of Hull, Faculty of Science & Engineering **February 2018 – May 2021**

Assisted with preparation and fulfilment of practical lab sessions, leading students and colleagues through pursuing and providing applied technical development plans. Educated second and third year students in C# scripting for Networking and Unity applications, deployment to remote devices such as the Hololens 2, Javascript and XML integration for front-end development, Git repository systems, and concurrent server APIs with test-driven development requirements. Lead second year students in managing team projects for business-oriented 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.

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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 – June 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.

Projects and Interests

Data Science, Machine Learning and AI

Leveraging a cross-codebase architecture with professional experience of C# and Python, against previous academic experience with data science and machine learning. Implemented vector-based, multi-dimensional structures for agent accuracy optimisation and parameter configuration, with multi-threaded parallelised training structures and event-driven automated testing. Identifying non-obvious predictable patterns across time series data, with augmentions from ascending orders of moving average interpolation, working back to root data elements for sequential prediction.

Graphic Design and Asset Creation

Produced poster graphic, three-dimensional model and merchandise designs for University societies and student union election campaigns, across Hull and York. Coordinated publicity and event marketing campaigns with local venue owners and organisers. Developed virtual environments for the Janus VR platform, using Source 2 and Unity.

Music and Audio Production

Experimented with physically-modelled VSTs, sample banks and simulated guitar effects to produce standalone music projects, and score various independent game titles. Released 3 EP collections via online music streaming services, gaining a small international audience. Producing new music, for local symphonic power metal band concepts and live performers, throughout a local network of professionals and hobbyists.

Cars and D.I.Y.

Working on such abstract projects, I admire the hands-on nature of any traditional shed-based hobby, and take care to keep such skills as sharp as I can – performing my own oil changes and electric maintenance on my daily driver, and making my own furniture from pieces I find abandoned, or have acquired for other purposes.