Emre Dogan

Enfield, London │ (+44) 7467 525 433 │ contact@emredogan.co.uk │ emredogan.co.uk

Employment

Graphics Engineer   **nDreams**   **Winter 2023 – Autumn 2024**

- Performance profiling for projects, identifying bottlenecks using tools such as Unreal Insights and Render Doc.
- Working closely with Technical Artists to optimize runtime performance for Mobile Tiled GPU architectures.
- Customizing Unreal Engine 4/5's render pipeline for optimal performance for Mobile VR platforms (e.g. using Vulkan subpasses to perform cheap post processing on Quest 2 & Quest 3).
- Implementing UI tooling for use by technical artists to help inform areas for performance improvement (e.g. Debug views such as Pixel Overdraw, X-Ray, & Vertex Density).
- Setup of PSO Pre-compilation along with PSO caching for all supported platforms on projects.

Software Developer   **Computacenter**   **Summer 2020 – Fall 2021**

- Communicated with high-profile clients to refine requirements for prototypes.
- Enhanced customer prototypes into *3D/VR* demos using *Unity* and *AWS Sumerian respectively*.
- Streamlined stress points in team's workflow using tools such as *PowerShell* and Microsoft *Azure* services.
- Developed machine vision equipped cross-platform mobile application using *Flutter* to resolve long-running problems with warehouse inventory management.
- Maintained team's *DevOps/Cloud* infrastructure and customer portal using *Azure*, *Terraform*, and *NodeJS*.

Projects   *More projects available at: **emredogan.co.uk***

Fracked (Quest 2/3 Port) – *Unreal Engine 4*   **nDreams**

- Pre-production performance investigation to establish bulk of optimization work required.
- Optimization/Removal of graphical features for mobile platform (removal of full screen post FX, usage of Vulkan subpasses).
- Usage of Unreal Engine 4's optimization systems to bring game within frame time budgets (Precomputed Visibility, HLODs, Cull Distance Volumes).
- PSO Caching for both Quest 2 & Quest 3 to ensure a hitch-free first-time experience for players.

Ghostbusters: Rise of The Ghost Lord - *Unreal Engine 4*   **nDreams**

- Performance profiling to identify performance hotspots & hitches within levels.
- PSO Caching for both Quest 2 & Quest 3 to ensure a hitch-free first-time experience for players.
- UI integration of Unreal Engine 4's PSO pre-compilation system.

Vulkan C++ Graphics Renderer   **Personal**

- Built renderer from ground up using base API calls.
- Designed *Forward renderer* supporting *Ray-Traced shadows*, *reflections*, *refractions*.
- Mouse Picking built using stencil buffers allowing for transformation of objects.

Skills

Programming Languages	C++, C#, HLSL, GLSL	**Tools**	Unreal Engine, Vulkan, Unity

Education

BSc Computer Science w/ Games Technology (**First Class**) – City, University of London – June 2022