Volkan Ilbeyli

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https://www.linkedin.com/in/volkanilbeyli/
https://vilbeyli.github.io/

Skills

Programming	: C, C++, C#, HLSL/GLSL, DXBC/DXIL
Engines/Tools	: UE4, Unity3D, RenderDoc, RGP/NSight, PIX, GPUView, VisualStudio, VSCode
APIs	: DirectX12/11, Vulkan, WinAPI. *Familiar: Metal2, gnm, OpenGL4, WebGL*
Graphics	: CPU/GPU Optimizations, PBR, HDR, PostProcessing, Lighting
Hardware/Platform	: GCN, RDNA, x86, Windows. *Familiar: Linux, PS4, XBox*
Scripting/VCS	: Batch, Powershell, Python, git, p4, SVN. *Familiar: JavaScript*
Other	: Jenkins, JIRA, Confluence, GitLab, Markdown, CMake. *Familiar: ROS, GIMP*

Work Experience

Senior Software Engineer, Advanced Micro Devices, Inc. (ON, Canada)   Nov. 2020 – Current

Senior Software Engineer, Advanced Micro Devices, Inc. (WA, USA)   April 2019 – May 2020

- Analyze AAA game builds, identify GPU performance bottlenecks and prepare technical reports
- Collaborate with external partners and internal AMD teams for performance optimizations
- Design and implement efficient rendering techniques with DirectX12, Vulkan, HLSL/GLSL
- Integrate various AMD technologies (FidelityFX: FSR, CAS, LPM, etc.) into game titles and UE4
- Meet AMD's game development partners, present AMD tech and help build relationships

Graphics/Tools Programmer, Confetti Special Effects (CA, USA)   May 2017 – April 2019

- Worked on optimizing Pyre – PlayStation 4 (Supergiant Games) for 2 months
  - Integrated a 3rd-Party GPU-compute-based video decoder into existing codebase
  - Improved CPU thread utilization through job scheduling and fixed threading issues
- Implemented instanced rendering and WebGL1-backwards-compatibility for Amazon's Sumerian
- Maintained the company's rendering framework, added unit tests and improved demo scenes
- Built a custom, online SDK installer for StarVR using C#, WinForms, Robocopy and NPM
- Ported an internal 3D tool from Win64 to iOS/MacOS and setup build scripts for the project
- Built a touch screen UI for the material editor of the internal 3D tool for using C++ and imGUI
- Worked on CPU optimizations for a Unity3D VR game using GPU instancing and asset batching

Open Source - GitHub

vilbeyli/VQEngine – 3D Renderer (DirectX12)   June 2020 - Current

- PBR, PCF Shadow Maps, HDRI IBL, AO, MSAA, AMD FSR1, HDR10 – scRGB, Multi-threading, UI

Education

M.Sc. Computer Science, *DigiPen Institute of Technology*, Redmond, WA, USA   May 2017

B.Sc. Computer Engineering, *Istanbul Technical University*, Istanbul, Turkey   June 2014