Volkan Ilbeyli

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Skills

- **Languages** : C, C++, C#, HLSL. Familiar with GLSL, Python, Batch, JavaScript
- **APIs** : DirectX11/12, WebGL 1/2. Familiar with PS4, OpenGL4
- **Graphics** : PBR, SSAO, Deferred Rendering, Optimization, Ray Tracing, 3D Animation
- **Engines/Tools** : Unreal Engine 4, Unity3D, RenderDoc, AMD/NVidia GPU Profilers, VS 2017
- **Other** : git, SVN, Robocopy. Familiar with Linux, FBXSDK, GIMP, Jenkins, JIRA

Work Experience

Graphics Programmer, Confetti Special Effects (CA) — May 2017 - Current

- 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
- Optimized Unreal Engine 4's rendering thread for a mobile VR/AR demo for Magic Leap
- Implemented instanced rendering and WebGL1-backwards-compatibility for Amazon Sumerian
- Maintained the internal multi-platform rendering framework for error-free and stable operation
- Built an Installer with custom skin for Starbreeze - StarVR SDK using C# WinForms

Internship

Graphics Programming Intern, Confetti Special Effects (CA) — Summer 2016

- Ported company's tech demo game from Win32 to PS4 using the internal rendering framework

Academic/Game Projects

VQEngine – Open Source 3D Renderer (C++11/DirectX11) — Spring 2017 - Current

- Implemented a rendering framework with Shader Reflection, PBR Environment Lighting & SSAO

3D Animation Renderer (C++/DirectX11) — Spring 2017

- Implemented a 3D FBX animation renderer using VQS data structure for smooth interpolation
- Implemented Inverse Kinematics (IK) using Cyclic-Coordinate Descend (CCD) algorithm

UI Programmer, *Larina* - Hack'n'Slash (Unreal Engine 4) — Fall 2016 - Spring 2017

- Designed and implemented UI & HUD using GIMP and Blueprints of UE4
- Performed QA and ensured game stability through installation and playing stages

Graphics Programmer, *Unlit* - 2.5D Platformer (C++/OpenGL4) — Spring 2016

- Designed and developed a physically-based 3D OpenGL renderer

Education

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

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