

## Volkan Ilbeyli

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### Skills

- **Languages** : C/C++, HLSL. Familiar w/ C#, GLSL
- **Graphics** : API: DirectX11, DirectX12. Familiar w/ PS4, OpenGL4, Vulkan  
: Techniques: PBR, SSAO, Deferred Rendering, Ray Tracing, 3D Animation
- **Engines/Tools** : Unreal Engine 4, RenderDoc, AMD/NVIDIA GPU Profilers, VS 2015/17
- **Other** : git, SVN. Familiar w/ Linux, FBXSDK, GIMP

### Work Experience

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

- Worked on optimizing Pyre – PlayStation 4 (Supergiant Games) for 2 months
  - Integrated a 3<sup>rd</sup>-Party GPU-compute-based video decoder into existing codebase
  - Utilized an SSE-enabled math library through C++/C# interoperability
  - Improved CPU thread utilization through job scheduling
  - Fixed rendering and threading issues through QA
- Wrote a calibration procedure for a VR tracking system to extend a calibration tool of a VR SDK
- Maintained the internal multi-platform rendering framework for error-free and stable operation
- Customized Unreal Engine 4 for a VR platform

### 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
- Maintained the rendering framework for bug-free operation

### Academic/Game Projects

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
- Optimized the build process by rearranging includes to reduce iteration time

### Education

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

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