

Akshat Thukral

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SKILLS

Languages: C++, C, C#.

Engines: Anvil-Scimitar (Ubisoft Engine), Unreal Engine 4, Unity 3D.

API: WebGL 2.0, Direct3D 9.

Profiling Tools: Razor GPU, Razor CPU, PIX, RenderDoc, Nvidia NSight, Ubisoft In-house Profiler.

EXPERIENCE

Junior Engine Programmer - Ubisoft (Pune)

Prince of Persia Sands of Time Remake - PS4, XB1, PC

October 2019 - Present

- Upgraded Simplygon SDK and fixed SDK integration issues in the engine.
- Refactored streaming install implementations for PS4 and XboxOne.
- Implemented UI flow for partially installed data.
- Worked on the cleanup of the data depot and the bootstrap data.
- Worked on local wind implementation for vegetation.
- Added new triggers for the loading system in the engine.
- Modified boot flow of the engine for game-specific scenarios.
- Ported legacy code from C99 to C++17. Fixed various threading and architecture-specific issues.
- Added several debug counters for the art and QC team.
- Integrated Oodle2 compression to the engine for PS4, XboxOne, and PC and updated data generation processes to accommodate for the same.
- Updated PS4 and XboxOne SDKs to the latest compliant SDKs.
- Fixed several graphics issues for XboxOne after SDK upgrades (PSO compilation, Depth-Resource artifacts, etc).
- Fixed compiler RVO issues after switching to LLVM 9.0.
- Worked on PC security implementation for data. Modified in-house gameplay languages and parsers to add support for the same.
- Updated memory manager for PS4 to query the flexible memory properly.
- Worked on several PC requirements such as graphic options, display options, multi-monitor support, letterboxing, etc.
- Worked on general memory and performance optimizations.
- Extensively profiled and isolated bottlenecks and memory leaks both GPU and CPU side.

Junior Technical Artist - Ubisoft (Pune)

Prince of Persia Sands of Time Remake - PS4, XB1, PC

Jan 2019 - October 2019

- Implemented an animated texture component in the engine for animated light cookies.
- Fixed several rigging and animation plugins for 3DS Max and Motionbuilder.
- Implemented a batch import/export and auto ingredient skinning plugin for 3DS Max.
- Worked on planning out the memory and frame time optimizations from the art perspective.
- Trained artists to follow the optimal workflow and how to optimize the current assets.

- *Worked on profiling and highlighting issues from the art side.*
- *Wrote an asset management tool in Anvil to display the current stats of meshes, materials, shaders, etc. in the world.*
- *Worked with the VFX artists to automate certain tedious processes and fix issues.*
- *Refactored the FX manager tool and added support for handling different worlds at the same time.*
- *Added support for new Photoshop versions (CC 2019 and further) to the Anvil engine auto texture import on save feature.*

Intern Technical Artist - Ubisoft (Pune)

Prince of Persia Sands of Time Remake - PS4, XB1, PC

July 2018 - Jan 2019

- *Fixed 3DS Max, MotionBuilder, and Substance Painter integration issues for the Anvil engine.*
- *Fixed the auto-sync feature for in-house DCC plugins on submit.*
- *Added several validation scripts to streamline and mitigate errors in the art workflow.*
- *Helped establish the direction of animation, modeling, and rigging workflow.*
- *Created helper scripts for deep duplication of entities in the engine and moving a level from one world to another.*
- *Researched existing implementations in the engine to further support the art pipeline.*

Intern Programmer - Ubisoft (Pune)

Trials Frontier - iOS, Android, tvOS, AndroidTV

January 2018 - July 2018

- *Added preliminary support for Android P beta builds.*
- *Implemented generic and scalable UI containers for monthly events.*
- *Introduced new FTUE flows as per design requirements.*
- *Fixed controller implementation for AndroidTV and tvOS.*
- *Added new currency type in-game.*
- *Added support for iPhoneX notch in-game.*
- *Integrated, upgraded, and removed several Ad-SDKs. (ADMob, HyperMX etc..).*
- *Worked on bringing down the crash ratio and general stability of the game.*

Intern Game Developer - Absentia Virtual Reality

Canceled Mobile FPS - Android

June 2017 - August 2017

- *Worked on several prototypes for Google Cardboard VR.*
- *Implemented a plugin in Unity for procedural generation of level using OpenStreetMap.*
- *Worked on designing several levels.*
- *Created a base working prototype for the FPS game.*
- *Worked on Character Cloth modeling.*
- *Worked on an Excel import/export Unity Plugin.*
- *Wrote scripts for modifying animation curves in Unity.*
- *Worked with several other tools like B2M, Morph3D, Gaia, etc for designing the environment.*

PERSONAL PROJECTS

Anarchy Engine - Custom home engine to work as a test bench for home as well as work. Implementation in partnership with another colleague.

March 2020 - Present

D3D9 Renderer - DirectX 9 implementation supporting Tonemapping, Normal Mapping, Shader Hot Reload, Batch Rendering, and Modular Framework design.

February 2019 - April 2019

Renderz - *An open source WebGL2 2D Render Engine in JS.*

March 2018 - May 2018

Little JSON Reader - *An open-source lightweight JSONread-only parser in C++*

Jan 2018 - Jan 2018

SpaceBoy Adventures - *2D Android Platformer using Unity 3D and C#.*

November 2017 - December 2017

Flappy Plane Clone - *2D Android Game using Unity 3D and C#.*

July 2017 - July 2017

Inventory - *CLI Inventory software made using C++.*

June 2015 - July 2015

ACADEMIC QUALIFICATION

Qualification	University	Year of Passing	GPA
Bachelors of Technology in Computer Science and Engineering	Ansal University	2018	3.25/4.00