

# Satchit Subramanian

## Game Programmer

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Website [www.satchitns.com](http://www.satchitns.com)

<b>Skills</b> <b>Programming</b> <b>Engines</b> <b>Tools</b>	C, C++, C#, 68000 Assembly, Java, Python Unreal Engine 4, Unity 5 Visual Studio, Perforce, Git, BitBucket, Photoshop	<b>Education</b> <b>BE, Computer Science and Engineering</b>  <b>MS, Interactive Entertainment</b>	<b>Anna University</b> (SSN College) <i>Jun 2013 - May 2017</i> <b>University of Central Florida</b> (FIEA) <i>Aug 2017 – Dec 2018</i>
<b>Projects</b>	<p><b>Project Dragon   FIEA – Dec 2017 – Feb 2018 - Lead Programmer (UE4/C++)</b></p> <ul style="list-style-type: none"> <li>Implemented flying character controller with two modes, dynamic camera, ranged attack, damage, UI systems</li> <li>Optimized the game and worked on various debugging tasks</li> <li>Set up code-quality guidelines and system architecture and coordinated a team of 5 programmers</li> <li>Worked with a multi-disciplinary team of 14 and coordinated with leads for scoping, sprint planning and design</li> </ul> <p><b>Data-Driven Game Engine   FIEA – Jan 2018 – Apr 2018 - Solo Programmer (C++/OpenGL/DirectX)</b></p> <ul style="list-style-type: none"> <li>Built a data-driven game engine in C++, using C++ 11 features</li> <li>Architected a Json parser and provided Json-based scripting support</li> <li>Unit-tested all branches of code and documented with Javadocs formatting</li> </ul> <p><b>Treasures in Time   FIEA – Jan 2018 – Apr 2018 - Lead Programmer (UE4/C++)</b></p> <ul style="list-style-type: none"> <li>Coordinated with a Judaic studies subject matter expert and a multi-disciplinary team of 12 to build a top-down point-and-click adventure game</li> <li>Crafted an inventory system to view various artifacts up close with rotation</li> <li>Created a robust, object-oriented dialog and conversation system with provisions for avatars with multiple expressions</li> </ul> <p><b>Rapid Prototype Projects   FIEA – Aug 2017 – Dec 2017 - Solo Programmer (Unity/C# &amp; UE4/C++)</b></p> <ul style="list-style-type: none"> <li>Worked on four different rapid prototype projects made with Unity and Unreal Engine in multi-disciplinary teams of 4-5 people</li> <li>Implemented rag-doll physics based fighting with detachable limbs, Unreal VR, Unity Networking, material-based streamed-level transitions and all the gameplay, animation and UI programming</li> </ul> <p><b>Dynamic 2D Shadows   Personal Project - Solo Programmer (Unity/C#)</b></p> <ul style="list-style-type: none"> <li>Generated 2D shadow/light meshes using only collider information, using an optimized algorithm that minimized ray-casts and object lookups</li> <li>Created multiple types of extensible light sources – circular, arc-based, collider-confined with full support for movement, rotation and overlapping</li> </ul> <p><b>Terrain Generation   Personal Project - Solo Programmer (Unity/C#)</b></p> <ul style="list-style-type: none"> <li>Implemented improved 3D Perlin noise in Unity/ C# using Ken Perlin's paper</li> <li>Scripted a configurable terrain mesh generator with seed, frequency, octaves, lacunarity, persistence</li> <li>Animated water by moving through the layers of 3D noise and deforming the mesh</li> </ul>		
<b>Work Experience</b>	<p><b>Nanoforge   Canada (remote) – Jan 2017 – May 2017 – Programmer (Unity/C#)</b></p> <ul style="list-style-type: none"> <li>Radial UI menu scripting with sub-menus, linear sliders, toggles, and integration of game mechanics with the menu</li> <li>Integrated OSVR for VR capabilities with custom VR overlay shaders</li> <li>Ported input system to Rewired Input and implemented gamepad support</li> </ul> <p><b>Kaleidozone   Chennai – Apr 2016 – May 2016 – Programmer (Unity/C#)</b></p> <ul style="list-style-type: none"> <li>Created a VR app using Oculus and Leap Motion SDKs with hand-gestures for model interactions and diegetic UI</li> </ul> <p><b>Metarvrse   Chennai – Nov 2015 – Feb 2016 - Solo Programmer (Internship) (Unity/C# &amp; UE4/C++)</b></p> <ul style="list-style-type: none"> <li>Worked with Vuforia, Oculus, Leap Motion SDKs to build 3 client-ready AR/VR apps and 2 proof-of-concept apps</li> <li>Handled memory management for large 3D assets in existing products and fixed app crashes on iOS</li> <li>Performed lighting, shader and material optimizations in existing products</li> </ul>		