

# NEERAJ SINGH THAKUR

## Game Programmer

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I am graduate from IIT Kanpur, experienced in leveraging agile frameworks to provide a robust code for high level development and have a confident command over Unity3D, C#, C++, Cg/HLSL, Java having worked in AI, Animations, UI, 3Cs, Optimization, Shader Graph, Render Pipelines, VR/AR technology. I am self-motivated critical thinker with excellent communication skills and very passionate about video games and new advancements in gaming industry.

## Work Experience

### Centre for Content Creation, Game Programmer,

(Jan18 - Present)

- Using IP characters to build game aiming to teach biology for **iOS** platform using **Unity3D** and **C# (VS code IDE)**
- In-charge of builds and debugging of **Android** platform. Using **Git** version control on Source Tree
- Built special skills, weapon auto-toggle, status & hit VFX, **gyro** camera mini-game and in-game alert system
- Helping in **AI, 3Cs, Animations, UI, Shader Graph, Debugging, Optimization** and Scriptable **Render Pipeline**

### Build Corner, Unity Programmer, Freelancer,

(Nov 17 - Jan 18)

- Wrote Surface Shaders in **Cg/HLSL** for VR **Oculus Go** to create realistic 'Tile Visualizer' with dynamic patterns and grouts settings that are changeable in runtime with most optimized Unity3D setting

### Mech Mocha Game Std. Pvt. Lim., Game Programmer Intern,

(May 16 - July 16)

- **Multiplayer unitypackage** 📦: Built a layer using Java and Android Studio which uses **Bluetooth API & Nearby Connections** and **Messages API** for offline and online communication for Unity3D and C#

### Indie Game Developer and Gameplay Programmer

(May14 - Present)

- **Retro Snake3D** 📦: **Procedural generated** levels| Android| designer friendly exposed parameters| Shipped
- **Chemical Carriageway** 📦: Infinite runner| Android| Unity3D, C#| Performance, Size Optimization| Shipped
- **Mixed Reality Encyclopedia** 📦: **VR/AR** edutainment android application for **Google Cardboard** built in 24-hours of Microsoft Code.fun.do hackathon at IIT Kanpur

(Visit my portfolio for more projects and information)

## Publications

**Reactive Display for Virtual Reality** 📦: Designed and built **3D interface** to browse through 360° contents in Virtual Reality and instigate feeling of discovery while exploring 360° and normal content. Tackled the problem of nausea caused by existing interfaces like photospheres by providing an intermediate interface before changing 360° content using **Homography** (Computer Vision) and dynamic field of view of cameras. Poster Paper published at **ISMAR** (IEEE Symposium on Mixed and Augmented Reality)

## Technical Skills

<b>Programming Languages</b>	C# (>3 years), Cg/HLSL, C++, Java, Js (>1 years), C, Python (<1years)
<b>Game Engines and IDEs</b>	Unity3D, Android Studio, Visual Studio Code, MonoDevelop, Sublime Text
<b>SDKs and APIs</b>	Google VR, Nearby Connections & Messages, Vuforia AR, OpenGL, Bluetooth
<b>Version Control &amp; Tools</b>	Git (Source tree, Fork and Terminal)

## Education

### Indian Institute of Technology (IIT) Kanpur, Bachelor of Technology,

(Jul 13 – Jul 17)

Major: Materials Science and Engineering, **CPI: 8.0/10.0**

- Data Structure & Algorithms, Computer Science & Graphics, Fundamentals of Computation, Physics, Calculus, Analytic Geometry, Trigonometry, Algebra, Engineering Graphics, Computational Methods in Engineering, OOPs