

# 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 working in games involving AI, Animations, UI, 3Cs, Optimization, Shader Graph, VR/AR and other technologies.

### Work Experience

#### Centre for Content Creation, Jr. Game Programmer,

(Jan18 - Present)

- Using IP characters to build game aiming to teach biology to younger audience in **Unity3D** and **C# (VS code IDE)**
- In-charge of builds and debugging of **Android** platform. Used **Git** version control on Source Tree
- Built special skills, weapon auto-toggle, status & hit VFX, **gyro** camera mini-game and in-game alert system
- Helped in **AI, 3Cs, Animations, UI, Shader Graph**, bugs fix, **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 Development

(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** 📁: Proposed/Built **3D interface** to browse through 360° contents in VR 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, VS 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 Graphics, Fundamentals of Computation, Object Oriented Programming, Calculus & Analytic Geometry, Linear Algebra, Engineering Graphics, Computational Methods in Engineering