

# NEERAJ SINGH THAKUR

## Game Programmer

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I am IIT Kanpur graduate, experienced in leveraging agile frameworks to provide a robust code for high level development having confident command over Unity3D, C#, C++. Skilled in AI, UI, 3Cs, Optimization, Render Pipelines, VR/AR. I am creative, self-motivated, critical thinker, excellent communicator and very passionate about games.

## 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 and Fork
- Built in-game alert, **gyro** camera mini-game, special skills, weapons auto-toggle, status and hit VFX system
- Adept in **AI**, **3Cs**, Animations, UI, **Shader Graph**, Debugging, **Optimization** and Scriptable **Render Pipeline**

### Build Corner, Unity Programmer, Freelancer,

(Nov 17 - Jan 18)

- **Smart Display** 📺: Wrote Surface Shaders from scratch in **Cg/HLSL** for VR **Oculus Go** with runtime editable patterns and configured for most optimized Unity3D settings. System installed in over 10 major cities of India

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

(May 16 - July 16)

- **Multiplayer unitypackage** 📺: Built communication layer between Unity3D and Android Studio using **C#** and **Java**. Used **Bluetooth API** & **Nearby Connections API** for offline and **Messages API** for online communication

### Indie Game Developer and Gameplay Programmer

(May14 - Present)

- **Shiro Dash** 📺: Client Development| Game Design| Design Document| Unity3D, C#| Ads| Analytics| Shipped
- **Retro Snake3D** 📺: **Procedural generated** levels| Android| Level Design| Game Balancing| 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 contents using **Homography** (Computer Vision) and dynamic field of view of cameras. Tackled the problem of nausea caused by existing interfaces by providing an intermediate interface. 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, C (2+ years); MATLAB, Python, HTML
<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)
<b>Software Development Processes &amp; Methodologies</b>	Domain-driven, Test-driven and Agile development, Continuous Integration & Delivery, Prototyping, SOLID, Scrum, Dynamic Systems Development Method

## 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, Analytic Geometry, Physics, Calculus, Trigonometry, Algebra, Design Patterns, Software Architecture, Object Oriented Programming

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