about me.

I'm a senior undergraduate at IIT Gandhinagar. I'm into developing games, VFX, editing videos, computer graphics, and simulations.

showreel.

PROJECTS & GAMES SHOWREEL 2022

RIG TO THE

links to projects.

FASTER THAN LIGHT?

TWO OPPOSITE

SOUL SHARD

#R2M

RESUME MENU

Aniket Rajnish

+917765961770
aniket.r@iitgn.ac.in
makra.wtf

education.

IIT GANDHINAGAR, 2019 - 23 | **CPI** 8.1 / 10

Majors in **Mechanical Engineering** with minors in **Computer Science**

work experience.

Game Developer, CrazyLabs   **(Aug 2021 - Mar 2022)**

Contracted as a partner game studio to create scalable hyper-casual games by looking after their ideation & development. Delivered 6 prototypes, 30 concept pitches & 1 market-ready game currently under further development for publishing

Technical Art & Design Intern, FIEA, University of Central Florida

(May 2022 - July 2022)

Assisted the 19SOB team at FIEA with their capstone project as a tech artist for shader & gameplay programming, and the development of various particle & VFX systems under the guidance of Prof. Ron Weaver and Prof. Chris Roda. Curated development logs and documentation to the game which can be found here.

positions of responsibility.

Secretary, Game Dev Club, IIT Gandhinagar   (Aug 2020 - Apr 2021)

- Got selected as the secretary in my sophomore year itself taught a team of over 100 game developers the basics of Unity & Game Development.
- Organized an AR workshop attended by over 300 people from IIT Bombay, IIT Hyderabad, and IIT Gandhinagar. Taught the basics of Unity & Vuforia.
- Organized GameJam 2020 AD, the third biggest Indian game-jam on itch.io then where 600+ people submitted 90+ games.

Technical Secretary, IIT Gandhinagar   (Apr 2022 - Present)

- Got elected by students to serve as the Technical Secretary of IIT Gandhinagar, following my acclaimed term as overall technical coordinator.
- Leading a team of 35 people across various technical disciplines, pioneering the institute's maiden Student Satellite Programme, Student-led Short-Courses, technical fests, off campus placements & internships while building spaces for Technical Innovation, among others.

skill summary.

Tools & Technologies: Unity, Unreal Engine 4, Adobe XD, Git & GitHub, Premiere Pro, OpenGL, GameMaker Studio 2, Godot, MATLAB, Blender
Languages: C#, C++, HLSL, GLSL, Python, XML

achievements.

- **Ranked #22 Internationally,** out of 10k+ participants**, Brackeys GameJam 2021.1** for Two Opposites**. Ranked #1 Internationally, Jamboost GameJam** out of 300+ participants, won $1000 for Faster Than Light?
- **Developed games downloaded over 447K+ times on Play Store** and played 2M+ times.
- **1 of 27** budding student-authors published in *Cobalt Blue* among students of Delhi Public Schools across the nation.
- **1 of 100** students selected for Chennai Mathematical Institute in 2019.
- **Ranked #2 Nationally**, Indian Commerce Olympiad in Mathematics & Aptitude in 2013.
- **Top 0.4 percentile in JEE Mains 2019** out of 1.3 million students.
- **Top 2 percentile in JEE Advanced 2019** out of 2 lakh students.

games.

[Soul Shard](#) (FIEA, University of Central Florida) published on Steam
- Became competent with the workflow principles followed in Unreal Engine (Materials, Lighting & Reflections, Blueprinting, Niagara, Landscape sculpting, Post Processing, Quixel).
- Developed a dynamic footprint system for main characters as well as VFX effects like stylized fire, smoke, debris & flames.
- Developed a dynamic snowstorm system and rope physics for cables and a dynamic loading screen for various scene transitions.
- The development update to the project can be found [here](#).

[Faster Than Light (Hyper Casual)](#) (Won Jamboost GameJam & 1000$)
- Won the Jamboost game jam hosted by [Chartboost](#) and a prize of 1000$.
- Got 180$ for promotion by [Kwalee](#) and it performed well in their CPI tests.
- Engineered every mechanic & enemy AI of the game and the lighting and shaders used in the game.
- Optimized time control mechanics and real-time indoor lighting for the mobile platforms. Repo [here](#).

[Faster Than Light (PC)](#) (#3 in Popularity, Brackeys GameJam 2020.1)
- Developed in 7 days for the 2020 Brackeys Game Jam (with 9k+ participants). Secured #71 rank in the Audio category and #132 overall.
- Engineered every mechanic & enemy AI of the game and the lighting and shaders used in the game.
- Implemented player physics from scratch that would allow the player to move in space independent of the world's timescale as well as the bullet-time mechanics.

[Two Opposites](#) (Ranked #22 internationally, Brackeys GameJam)
- Developed in a team of 3 with me looking after game mechanics, lighting & shaders, UI design, sound design, and the overall production of the game.
- Made in a week for the 2021 Brackeys Game Jam (2nd biggest gamejam on itch with 10k+ participants) where it ranked #22 in the innovation category, #44 in the Game Design category and #71 overall.
- Programmed every mechanic of the game which included, but not limited to mirror movement, multiple camera setup.
- Made my own 2d lighting system from scratch using raycasts. Repo [here](#).

[Are Ya Winning, Son?](#) (Made in 48 hours)
- Made in 2 days for the 2020 GMTK Game Jam (Biggest game jam then on itch with 19k+ participants) and Game's presentation ranked #221.
- Learnt to prototype small games in Unity in a limited amount of time.

[Covid 19 Survival Royale](#) (Won intra-college game jam)
- An FPS-shooter pandemic simulator that I made as a starter project in Unity and got the first prize in a game jam hosted by my college.
- Learnt gun mechanics, enemy AI programming and crowd simulation.

Find more games developed by me [here](#).

vfx and edits.

[Shaders - GameJam 2020 AD Trailer](#)
[VFX Graphs - GameJam 2020 AD Theme Reveal Video](#)
[Motion tracking in Blender and After Effects - Recreated](#)
[Coldplay's Up&Up Music Video](#)
[Particle System in Unity- Psychedelic Edit](#)
[Particle System in Blender - Recreated Interstellar's Black Hole](#)
[Twixtor in Adobe Premiere Pro - Blithchron 20 Teaser Particle](#)
[System in Unity - Fractals](#)

projects.

[C# + Unity Implementation of a Raymarching Graphics Engine.](#)

- Individually developed a fast raymarcher for Unity with support for 28 primitives (including fractals, n-dimensional objects, volumetric clouds).
- Implemented compute-buffers, raymarching signed-distance functions, built a custom interface for manipulating shader parameters through the editor.

[Mathematical Model for Rendering using Gaussian Elimination.](#)

- Mathematically modeled and implemented a 3D rendering technique that uses numerical methods to calculate the intersection of planes and render 3D objects as a part of the MA202 course project.

[Rendering a 4D Hypercube](#)

- Demonstrated a 3D section of a rotating 4D Hypercube by using rotation and projection matrices as a part of the MA202 course project.
- Extended this approach to render the [4D Hypercube (with faces) in Unity](#) using mesh generation and GL Library and created an [NFT collection](#) of these 4D Hypercubes as well.

[Procedural Generation of 3D space from 2D map using Raycasts](#)

- Single-handedly developed a 3D Renderer in Scratch using principles of raycasting, with features such as varying FOV and shadow-mapping.
- Any 2D map you input gets converted into a 3D world that gets procedurally generated around you.

[Project Holly](#)

- Built a platform for interactive movies to unify games & movies using Unity. Developed an asset that streams a video in small chunks based on choices.

[Physics Simulations in Unity](#)

- Developed a 3D renderer in Scratch using the traditional concept of raycasting used in games like VCop2 and Wolfenstein 3D. Implemented features like varying camera FOV & shadow mapping.
- Any 2D map you input gets converted into a 3D world that gets procedurally generated around you.

relevant coursework.

DES 492-1 - Gaming New Worlds

- The course involved modding a pre-existing game, developing a sandbox-style game, speculation of the different outcomes of the game, and development of a hypertext game with a non-linear branching story.
- All the assignments delivered can be found [here](#).

CS 499 - SDFNet (Graphics Research) - Ongoing

- Improving the CSGNet (a neural architecture that takes as input a 2D or 3D shape and induces a program to generate it) by adding more shape information, introducing color reconstruction, and creating a 2D image to 3D mesh pipeline under the guidance of Prof. [Shanmuganathan Raman](#).
- All the deliverables for the project can be found [here](#).

DES 499 - Jantar Mantar Reconstruction - Ongoing

- Designing and developing an interactive environment of the various yantras at Jantar Mantar as playable experience. The project is mentored by Prof. [Sameer Sahasrabudhe](#) with funding provided by [MHRD](#).
- All the deliverables for the project can be found [here](#).

DES 391-1 - On the Possibility of Board Games - Ongoing

- The course is an advancement of DES 492-1 and involves 6 modules that covers various aspects of board games and game design in general.
- Apart from all the topics covered in the previous course this curriculum also expects us to create cinematics for the various games we developed earlier. Apart from this, we're expected to design and develop a war game and use all the knowledge we gained after undertaking both the courses into a final game.
- All the assignments delivered can be found [here](#).