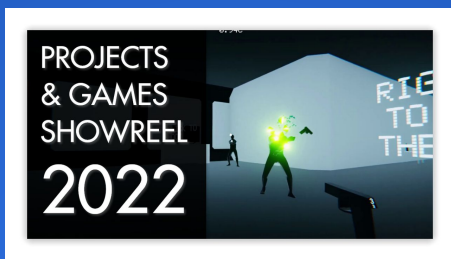




## about me.

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

## showreel.



## links to projects.



# Aniket Rajnish

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[Portfolio Website](#)

## education.

IIT GANDHINAGAR, 2019 - 23 | CPI 8.33 / 10

Majors in **Mechanical Engineering** with minors in **CSE and Design**

## work experience.

### Game Developer, CrazyLabs

(Aug 2021 - Mar 2022)

- Led partner game studio in the creation of hyper-casual games, resulting in development of [6 prototypes](#), [30 concept pitches](#) & 1 market-ready game.
- Oversaw the ideation & development process, resulting in the creation of high-quality and innovative games with potential for wide audience appeal.

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

(May 2022 - July 2022)

- Provided technical art & design assistance to the [19SOB](#) team at Florida Interactive Entertainment Academy (FIEA) on their capstone project, including work on shader & gameplay programming, and the development of particle & VFX systems under guidance of Prof. [Ron Weaver](#) & [Chris Roda](#).
- Curated a [documentation](#), demonstrating attention to detail in my work.

## positions of responsibility.

### Secretary, Game Dev Club, IIT Gandhinagar

(Aug 2020 - Apr 2021)

- Selected as secretary during sophomore year itself and provided instruction on Unity and basics of game development to over 100 game developers.
- Organized & led AR workshop attended by 300+ people from multiple IITs and NITs, where I taught Unity & Vuforia for AR application development.
- Successfully organized [GameJam 2020 AD](#), the third largest Indian game-jam on itch.io at the time, with 600+ people submitting 90+ games
- Led a 7-week project to publish a game each week for college community.
- Built connections with big hypercasual studios like Kwalee & CrazyLabs.

### 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.

## achievements.

- Recipient of the **Director Fellowship Award** at FIEA, University of Central Florida- awarded to the best applicants for MS degree in Interactive Media.
- Ranked #22**, out of 10k+ participants, **Brackeys Game Jam 2021.1**.
- Ranked #1**, **Jamboost Game Jam** out of 300+ participants, won \$1000.
- Developed games downloaded over 447K+** and played 2M+ times.
- 1 of 27** student-authors published in *Cobalt Blue* among students of DPS.
- 1 of 100** students selected for Chennai Mathematical Institute in 2019.
- Ranked #2 Nationally**, Indian Commerce Olympiad (Maths, Aptitude).
- Received **11/10** grade in MS 403: Engineering Entrepreneurship course.
- Recipient of **Teaching Certification** from IIT Gandhinagar.
- Top 0.4 percentile** in JEE Mains & **0.3 percentile** in JEE Advanced.

## relevant coursework.

**Past:** DES 499 Jantar Mantar Reconstruction, CS 499 SDFNet (Graphics Research), DES 492-1 Gaming New Worlds, MS 403 Engineering Entrepreneurship, ES 102 Introduction to Computing, ES 201 Introduction to Design and Innovation, ES 101 Engineering Graphics, DES 391-1 Board Games, DES 692 Visual Design for Academia  
**Ongoing:** ES 301 Data Structures and Algorithms II, DES 302 Creativity, Design and Doing, DES 392-2 Information Design, CS 328 Introduction to Data Science



## games.

### [Soul Shard](#) (FIEA, University of Central Florida) published on Steam

- Acquired expertise in Unreal Engine – materials, lighting and reflections, blueprinting, Niagara, landscape sculpting, post processing, and Quixel.
- Developed a dynamic footprint system for main characters and VFX effects such as stylized fire, smoke, debris, and flames.
- Created a dynamic snowstorm system and implemented rope physics for cables, as well as a dynamic loading screen for various scene transitions.

### [Faster Than Light \(Hyper Casual\)](#) (Won Jamboost GameJam & 1000\$)

- Engineered all mechanics and enemy AI in the game, lighting and shaders.
- Optimized time control mechanics and real-time indoor lighting for mobile platforms, and made these open source with a [public repository](#) available.
- Earned 180\$ for promotion by Kwalee & performed well in their CPI tests.

### [Faster Than Light \(PC\)](#) (#3 in Popularity, Brackeys GameJam 2020.1)

- Engineered all mechanics, enemy AI, as well as the lighting and shaders.
- Developed player physics in 48 hours, allowing for [timescale-independent movement](#) in space, timescale manipulation, & [bullet-time mechanics](#).

### [Two Opposites](#) (Ranked #22 internationally, Brackeys GameJam)

- Made in a week for the 2021 Brackeys Game Jam
- Programmed every mechanic of the game which included, but not limited to mirror movement, multiple camera setup, etc.
- Formulated and developed a [2D Lighting System](#) in C# for Unity using raycasts and Unity started official support for it in a later update.

### [Are Ya Winning, Son?](#) (Made in 48 hours)

- Became proficient in generating ideas & quickly prototyping them in Unity.
- Developed shaders & implemented post-processing effects to create a [CRT TV aesthetic](#), gaining technical expertise in implementing visual effects.

## 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.

### [CSG + CNN to extract 3D Models from 2D images](#)

- Utilizing Constructive Solid Geometry and Convolutional Neural Networks to extract 3D models from 2D images, with a focus on developing a fast implementation of NeRF under guidance of Prof. [Shanmuganathan Raman](#).

### [MHRD-Project for the reconstruction of Jantar Mantar](#)

- Working with Prof. [Sameer Sahasrabudhe](#) to design, develop, and implement a virtual tour experience housed in the Jantar Mantar.

### [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.
- Extended this approach to render the 3D projection of [4D hypercubes](#).

### [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 input gets converted into a procedurally generated 3D world.

## vfx and edits.

[Shaders: Game Jam 2020 AD Trailer](#), [VFX Graphs: Game Jam 2020 AD Theme Reveal](#), [Motion tracking: Recreated Coldplay's Up&Up Music Video](#), [Particle System: Psychedelic Edit](#), [Particle System: Recreated Interstellar's Black Hole](#), [Twixtor: Blithchron 20 Teaser](#), [Particle System: Fractals](#)