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)**

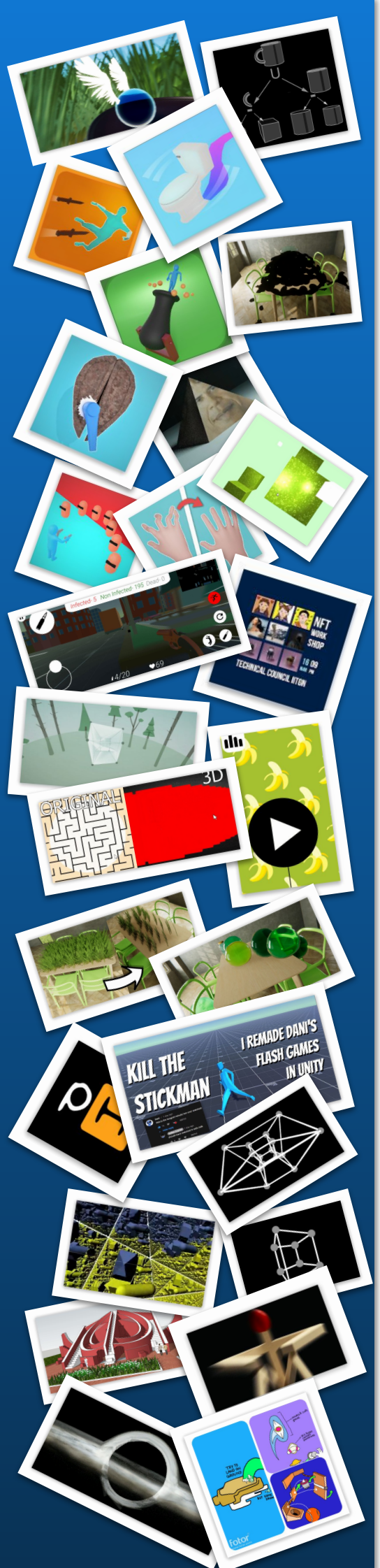
- Got elected by students to serve as the Technical Secretary of IIT Gandhinagar, following my acclaimed term as overall technical coordinator.
- Leading a team of 35 people across various technical disciplines, pioneering the Institute's maiden Student Satellite Programme, Student led Short Courses, 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.

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



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](#)