

EDUCATION

| Degree | Institution | CPI/% | Year |
|--------|-----------------|----------|-----------|
| B.Tech | IIT Gandhinagar | 8.1 / 10 | 2019-2023 |

EXPERIENCES and INTERSHIPS

- **Game Developer & Partner Studio, CrazyLabs** [Aug 2021- Mar 2022]
 - o Partnered as a game studio to create scalable hyper-casual games and concepts.
 - o Led ideation & development phases to deliver [6 prototypes](#), [30 concept pitches](#), and 1 market-ready game currently under further development for publishing.
- **Technical Art intern, FIEA, University of Central Florida** [May 2022- July 2022]
 - o Assisted the 19SOB team at FIEA with their capstone project as a tech artist for shader programming, gameplay programming, and the development of various particle and VFX systems under the guidance of **Prof. Ron Weaver** and **Prof. Chris Roda**.
 - o Curated development logs and documentation to the game which can be found [here](#).

PUBLISHED VIDEOGAMES

- [SoulShard](#) (FIEA, University of Central Florida) published on Steam.
 - o Developed dynamic footprinting system, VFX systems like fire, smoke, debris, dynamic snowstorm system, and rope physics for cables in Unreal Engine 4.
- [Two Opposites](#) (Ranked #22 internationally, Brackeys GameJam)
 - o Formulated and developed a [2D Lighting System](#) in C# for Unity using raycasts and Unity started official support for it in a later update. Programmed every mechanic for the game (including mirror movement, multiple camera setups, etc.)
- [Faster Than Light?](#) (#3 in Popularity, Brackeys GameJam 2020.1)
 - o Developed Enemy-AI, inverse superhot bullet-time mechanics & shaders in Unity.

PAST and ONGOING PROJECTS

- [MHRD-Project for the graphical reconstruction of Jantar Mantar.](#)
 - o Working with Prof. Sameer Sahasrabudhe to design, develop, and implement a user-friendly virtual tour experience housed in the Jantar Mantar, New Delhi.
- [C# + Unity Implementation of Raymarching-based Graphics Engine.](#)
 - o Single-handedly developed a fast, open-source raymarcher for Unity with support for 28 primitives (including fractals, n-dimensional objects, volumetric clouds).
 - o Implemented compute-buffers and raymarching signed-distance functions and built a custom interface for manipulating shader parameters through the editor.
- [CSG + Neural Radiance Fields to extract 3D Models from 2D images.](#)
 - o Using Constructive Solid Geometry and GAN-based Neural Radiance Fields (NeRFs) to predict symmetric 3D Models from 2D images under Prof. Shanmuganathan Raman.
- [Mathematical Model for 3D Rendering through Gaussian Elimination.](#)
 - o Mathematically modeled and implemented a 3D rendering technique that uses numerical methods to calculate the intersection of planes and render 3D objects.
 - o Extended this approach to render the 3D dimensional projection of [4D hypercubes](#).
- [Procedural Generation of 3D space from 2D Map through Ray Casting.](#)
 - o Developed a 3D Renderer in Scratch (a 2D Game Engine by MIT) using principles of raycasting, with features such as varying camera field-of-view and shadow-mapping.

POSITIONS OF RESPONSIBILITY

- **Secretary, Game Development Club, IIT Gandhinagar** [Aug 2020 - Apr 2021]
 - o Led a team of 100+ game developers, taught basics of Unity and Game Development.
 - o Organized AR workshop **attended by 300 people** from multiple IITs and NITs.
 - o Led a 7-week effort to publish one game weekly to the IIT Gandhinagar community.
 - o Organized **the third biggest Indian game jam** where **600+ people submitted 90+ games**.
- **Technical Secretary, IIT Gandhinagar** [Apr 2022 - Present]
 - o Got elected by students to serve as the Technical Secretary of IIT Gandhinagar, following my acclaimed term as overall technical coordinator in the previous year.
 - o Leading a team of 35 people in the council across various technical disciplines.
 - o Pioneering the institute's maiden **Student Satellite Programme, Student-led Short-Courses, and building spaces for Technical Innovation**, among others.

RELEVANT SKILLS

Very Proficient: Unity, C#, Unreal Engine 4, Adobe XD, Git, GitHub, HLSL, PremierePro
Proficient: OpenGL, GLSL, C++, C, Python, Pytorch, GameMaker Studio 2, Godot, Blender

ACHIEVEMENTS

- Among **100 students across India** selected for Chennai Mathematical Institute in 2019.
- **Ranked #22 Internationally**, out of 10k+ participants, **Brackeys GameJam 2021**.
- **Ranked #1 Internationally**, **Jamboost GameJam**, out of 300+ participants, won \$1000.
- **Ranked #2 Nationally**, Indian Commerce Olympiad in Mathematics & Aptitude in 2013.
- **One of 27 student-authors nationally** published in **Cobalt Blue** amongst all dipsites.
- Developed games **downloaded over 347K+ times** on Play Store and **played 500K+ times**.