

# Demo Reel



## Skills

- Unity Generalist
- Tools Programming
- 3D Math, Algebra, Calculus
- Technical UI Creation
- Version Control
- Optimization, Profiling
- Material & Shader Creation
- Particle Systems & VFX
- Generative AI APIs
- Technical Documentation
- Video Editing
- Understanding of 3D, Animation & Rendering Pipeline

## Tools & Languages

- Unity, C#, HLSL
- Python, PyMEL, PyQT
- Adobe XD
- Unreal Engine
- Git, GitHub, Perforce
- Maya
- Substance Designer
- Adobe Photoshop
- Adobe Premiere Pro

## Achievements

- **Summer Geometry Initiative Fellow** at MIT Computer Science and Artificial Intelligence Laboratory.
- Recipient of the **Gold Medal for Outstanding Innovation** at IIT Gandhinagar.
- Recipient of the **Director Fellowship Award** at FIEA.
- **1 of 100** students selected for Chennai Mathematical Institute in 2019.
- **Ranked #2 Nationally**, Indian Commerce Olympiad (Maths, Aptitude).
- **Top 0.4 percentile** in JEE Mains & **0.3 percentile** in JEE Advanced.
- **Ranked #22**, out of 10k+ participants, Brackeys Game Jam 2021.1.
- **Ranked #1**, Jamboost Game Jam out of 300+ participants, won \$1000.
- Received **Silver Medal** at Inter IIT Tech Meet for IGDC Gamedev Challenge
- Developed games **downloaded over 521K+** and **played 2M+** times.

# Aniket Rajnish



## Education

**2024** | MIT Computer Science and Artificial Intelligence Lab | Geometry Processing  
**2023 - 25** | FIEA, University of Central Florida | MS, Technical Art Track  
**2019 - 23** | IIT Gandhinagar | B.Tech, Mechanical Engineering, Design Minor

## Experience

### Technical Artist, Dragonfly Games

(Nov 2023 - Ongoing)

[FIEA Coursework Capstone Project for a student run studio]

- Developed post effects and VFX for the game contributing to its comical look.
- Responsible for establishing PBR workflow, implemented material functions to assign fine & parental controls over overall look of the environments developed.
- Responsible for all the tool development for the team, automating many tasks.
- Developed an optimized curly hair solution for UE5, reduced the draw calls it generated by 64x. A document about all my contributions can be found [here](#).

### Technical Artist & Project Lead, Lockheed Martin

(Jan 2024 - April 2024)

[FIEA Coursework Contract Project for Lockheed Martin]

- Led a team of 8 to develop a VR experience that demonstrates the JADO system and has a modular 3D asset gallery with a conversational AI companion.

### Third Party Developer, CrazyLabs

(Aug 2021 - Aug 2022)

- Contracted as a third-party game studio, and led a team of four, resulting in development of [6 prototypes](#), [30 concept pitches](#) and an unannounced title.
- Demonstrated a keen eye on time and performance constraints that go along with hypercasual prototype development along reaching a CPI as low as 0.28\$

### Technical Art & Design Contractor, 19 Souls on Board

(May 2022 - July 2022)

- Worked as a remote contractor, provided assistance in shader & gameplay programming, and VFX. Logs about my contribution can be found [here](#).

## Personal Projects

[Collider Optimizer for Unity](#) [300+ stars on Github] [80.lv Article]

- Developed a tool that optimizes Mesh & Polygon Colliders, for decreasing the performance overhead of real-time destruction by two folds in a team project.
- A C# implementation of the Ramer Douglas Peucker Algorithm and Quadric Error Metric simplification is used to smooth polylines and reduce number of paths created by Polygon Colliders and reduce the poly count of mesh collider.

[Text to Material for Unity](#)

- Developed a plugin for Unity that generates materials from text prompts in Unity to prototype materials quickly in project for placeholder assets & greyboxing.
- Sets material properties, generates base & normal maps using OpenAI API calls.
- Implemented algorithm to parse material properties from natural language input.

[PyQt Multi-Window Sync](#) [300+ stars on Github] [100k+ views on YouTube]

- Developed a windows GUI application using PyQt5 and qtSignal that demonstrates real-time synchronization between multiple window instances.

[Constructive Solid Geometry Dataset Generator](#)

- Developed a GPU-accelerated tool that creates procedurally raymarched 3D shape data sets and provides fine control over their transformations and quality.
- This tool automated the shape dataset generation pipeline for our CSE lab.

[Maya Auto Rigger \[Work in Progress\]](#)

- Developed to automate biped rig development for our capstone project.
- Implemented functionality for IK/FK switching & snapping, space switching, stretchy joints, wrist roll and reverse foot IK based the artists requirements.

[C# Implementation of a 4D Raymarching Engine](#)

- A raymarcher that helps render 4D objects. Implemented algorithms for lighting, AO and shadow calculation, compute-buffers, raymarching signed-distance functions, a shader math library for C# and a custom editor window.

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

- Formulated and developed a [2D Lighting System](#) in C# for Unity using ray casting, and Unity started official support for it in a later update.