Shikhar Bind

⊕ Portfolio | ⌨ github | ▣ linkedin | ✦ shikhar.bind2010@gmail.com | ☎ +91-9648852059

EDUCATION

Indian Institute of Technology Guwahati, India　　　　　　　　　　　　　　　　　　Nov 2020 - Present
Bachelors of Technology in Electronics and Electrical Engineering　　　　　　　　　　　GPA: 7.91/10.0

EXPERIENCE

Parallax Labs　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Apr. 2023 - Jul. 2023
XR Developer Fellowship　　　　　　　　　　　　　　　　　　　　　　　　　　　　Mumbai, India

- **Angioplasty Simulator**, Developed an immersive Angioplasty VR Simulator using **Unity**, enabling medical professionals to practice angioplasty procedures in a realistic virtual environment. Implemented player movement and user interface in virtual reality using **SteamVR**. Created a spline system using Bezier Curves for simulation of human arteries and various shaders in **Shader Graph**.
- **Visual Accessibility Toolkit**, Developed a Visual Accessibility Toolkit to simulate colorblindness for developers and make a color correction filter for colorblind players using **HLSL** and **Unity**. Created a custom editor and window for the toolkit.
- **Tech Stack:** Unity, SteamVR, Shader Graph, HLSL

PROJECTS

Campus Rush　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Oct. 2021 - Feb. 2022
Coding Club, IIT Guwahati　　　　　　　　　　　　　　　　　　　　　　　　　　　Github

- Ideated and developed a playable *virtual recreation* of IIT Guwahati with **1500+** downloads in a team of 10 members.
- Programmed game mechanics, scoring system, player movement, animation, and UI in **Unity Game Engine** and **C#**.
- Created authentication system and realtime leaderboard using **MySQL** database and **PHP** APIs, enhancing user experience.
- Implemented real-time gameplay synchronization between players over network connections using **Unity Netcode for GameObjects**.

Chiranjeevi　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Feb. 2023 - Present
GameDev and Esports Club, IIT Guwahati　　　　　　　　　　　　　　　　　　　　　Itch.io

- A *3D roguelike* role playing game about a character from Indian Mythology and his battles with Ashuras in **Unity**.
- Supervised a 5-member programming team for the project, shaping project architecture and ensuring efficient collaboration.
- Ideated and programmed game mechanics, game states and control flow, player movement, and user interface using **C#**.
- Created various shaders to enhance the visual appeal of the game using **Unity Shader Graph**.

Scotch Game Engine　　　　　　　　　　　　　　　　　　　　　　　　　　Mar. 2023 - Present
Personal Project　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Github

- Designed and implemented a *2D game engine* using **C++** and **ImGui** on which an interactive software can be developed.
- Implemented *graphics renderer* with **OpenGL**, optimizing performance for visually appealing scenes.
- Integrated **GLM**'s mathematical functions to handle physics calculations such as collisions, forces, and simulations.
- Developed a versatile **entity-component system** to manage game objects and behaviors efficiently.

Chess 2D　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Aug. 2023 - Present
Personal Project　　　　　　　　　　　　　　　　　　　　　　　　　　　　Github | Itch.io

- Collaboratively developed a cross-platform multiplayer *2D chess* game using **Unity game engine** and **C#**.
- Designed and optimized chess algorithms for efficient move generation, evaluation, and decision-making.
- Implemented real-time gameplay synchronization between players over network connections using **TCP sockets**.
- Created a player matchmaking system to facilitate seamless game setup and enhance player interactions.

IITG OLX　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　June 2022
Coding Club, IIT Guwahati　　　　　　　　　　　　　　　　　　　　　　　　　　　Github

- Designed and implemented an *e-commerce website* similar to OLX where one can sell or buy products using **Django** framework.
- Developed user registration, authentication, product listing, and profile management functionalities for seamless UX.
- Utilized Django's **ORM** to manage the database, ensuring efficient data storage and retrieval.
- Designed intuitive layout and user interface using **HTML**, **CSS**, and **Bootstrap**.

Other Projects

- **Devour** ↗ : A *Tower Defense* game developed using **Unity Game Engine**.
- **Ludo** ↗ : A Ludo game developed in **Unity** and networked with **Photon PUN**.

ACHIEVEMENTS

XROS Felllowship '23	Selected as one of **100** fellows among over **10,000** candidates.	2023
Techevince 9.0	Won **'Best Overall Project'** award for Chiranjeevi among **100** technical projects.	2023
Techevince 8.0	Won **'Best Overall Project'** award for Campus Rush among **110** technical projects.	2022
Respawn Game Jam	Secured **2nd rank** among more than **200** candidates in the Game Jam.	2022

TECHNICAL SKILLS

Programming languages: C++, C#, Python*　　　　　　　**Web Technologies:** HTML, CSS, ReactJS, Django, JavaScript
Networking Stacks: Photon PUN, Unity Netcode for GameObjects　　**Database Management:** MySQL, MongoDB
Game Technologies: Unity Game Engine, HLSL　　　　　　**Computer Networks:** Socket Programming (TCP/UDP)
Miscellaneous: AWS, Git, Plastic SCM　　　　　　　　　　　　　　　　　　　*Elementary proficiency*

RELEVANT COURSEWORK

Computer Science and Mathematics: Data Structures and Algorithms, Deep Learning, Optimization, Probability, Linear Algebra
Game Development: C# programming for Unity Game Development, Data Structures and Design Patterns for Game Developers

POSITIONS OF RESPONSIBILITY

Joint Secretary, GameDev and Esports Club, IIT Guwahati:　　　　　　　　　　　　　　2022 - 2023
Reinstated and heading GameDev module of the club to promote game development culture in IIT Guwahati. Organized a game development beginners course and workshops with 500 participants and led 5 game development projects.