Shrey Prajapati

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B.Tech - Electronics and Electrical Engineering
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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech	Indian Institute of Technology, Guwahati	7.10 (Current)	2020-Present
Senior Secondary	GSEB Board	73.54%	2020
Secondary	GSEB Board	90.67%	2018

PROJECTS

- **Ray-Tracer** *Jan 2023 - Present*
  Personal Project Github
  – Designed and implemented a raytracer using **C++** and **ImGui** which simulates the behavior of light as it interacts with objects in a virtual *3D* environment to generate photorealistic images.
  – Implemented features such as **soft shadows**, **reflections** and **bloom** to enhance the quality of rendered images.
  – Created an **interactive camera system** for viewport navigation, allowing users to adjust camera position and angle.

- **Audify** *May 2023*
  Coding Club, IIT Guwahati Github
  – Developed a multimedia conversion website using the **MERN** stack, enabling *video-to-audio* conversion via **FFmpeg**.
  – Led frontend development, integrating **Firebase** authentication and Context API for state management.
  – Developed the backend using **Node.js** and **MongoDB** to efficiently store user data and manage their files.
  – Introduced an innovative feature by integrating FFmpeg and YouTube to download **Spotify playlists** as zip file.

- **Chess 2D** *August 2023 - Present*
  Personal Project Github | Itch.io
  – Collaboratively developed a cross-platform multiplayer *2D chess* game using **Unity game engine** and **C#**.
  – Implemented core gameplay mechanics, game UI and game state management for an engaging player experience.
  – Developed and optimized chess game logic, including legal move generation and check/checkmate detection.

- **Devour!!** *April 2022*
  Respawn Gamejam, IIT Guwahati Github | Itch.io
  – Collaborated with a team of **3** members to create a *2D tower defense* game in **Unity game engine**.
  – Programmed the game mechanics, game states and control flow, and user interface using **C#**.
  – Worked on game balancing by deciding on game statistics such as *enemy damage*, *speed*, and *hero damage*.
  – Created 2D art assets using **Photoshop** to enhance the visual appeal of the game.

TECHNICAL SKILLS

- **Programming**: C, C++, C#, Python*
- **Web Technologies**: HTML, CSS, Javascript, Reactjs, Node.js, Express.js, MongoDB
- **Game Development**: Unity Game Engine, Blender
- **Miscellaneous**: Git, Plastic SCM, ImGui, HLSL, Verilog   ** Elementary proficiency*

KEY COURSES TAKEN

- **Computer Science**: Introduction to Computing, Computing Laboratory, Data Structures and Algorithms
- **Mathematics**: Linear Algebra, Basic Calculus, Probability and Random Processes
- **Others**: C# programming for Unity Game Development, AWS-JavaScript-React-Deploy Web Apps on the Cloud

POSITIONS OF RESPONSIBILITY

- **Tech Art Head**, GameDev and Esports Club, IIT Guwahati *May 2022 - March 2023*
  – Led the Tech Art team of the **GameDev Module** in creating visually stunning and immersive gaming experiences.
  – Conducted an introductory game development course and workshops, engaging with a total of **500** participants.

ACHIEVEMENTS

- **Techevince 9.0**, Won **'Best Overall Project'** award for Chiranjeevi among **100** technical projects. *2023*
- **Respawn Game Jam**, Secured **2nd** rank among more than **200** candidates in the Game Jam. *2022*
- **Joint Entrance Examination(Advanced) 2020**, Secured All India Rank **5756** among **0.15 million** candidates. *2020*
- **Joint Entrance Examination(Mains) 2020**, Secured All India Rank **6669** among **1 million** candidates. *2020*

EXTRACURRICULARS

- **Inter IIT Tech Meet**, Participated in *IGDC* Gamedev challenge of **Inter IIT Tech Meet 11.0**, IIT Kanpur. *2023*
- **Spardha**, Won *Gold* medal in Spardha 2023 and *Silver* medal in Spardha 2022 in *Hockey*. *2023*
- **Spirit 2022**, Participated in 9th edition of *Spirit* (annual sports festival of IIT Guwahati) in *Hockey*. *2022*