

Siddhartha Pratap Singh

2nd Year Undergraduate
Department of Chemistry

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2019 - 2023	B.S.(Bachelor of Science)	Indian Institute of Technology, Kanpur, India	6.83/10
2019	CBSE(XII)	Mahatma Hansraj Modern School, Jhansi	93.4%
2017	ICSE(X)	Margaret Leask Memorial English School, Jhansi	93.2%

Scholastic Achievements

- Secured **All India Rank 5012** in **JEE Advanced 2019** among the 2.0 lakh shortlisted candidates.
- Among the top 0.21% of the 12 lakh applicants in **JEE Mains 2019** with **All India Rank 2507**.
- Secured **Rank 47** among 1.5 lakh aspirants in **UPSEE 2019**.

Key Projects

- Lead Programmer, Lemonade Runner** (January '21- Ongoing)
Gamedev Society, IIT Kanpur
 - A Endless-Runner/Platformer game made in Unity using **C#**.
 - Co-ordinated amongst a team of 5 individuals to work upon the Project and monitor the regular contributions of the team.
 - Implemented the **2D RigidBody** character logic alongwith the UI and created a modular sprite workflow for the art team.
- Physically Based Rendering** (April '21- Ongoing)
Mentor: Mayant Mukul, Stamatics, IIT Kanpur.
 - Part of a **Stamatics** Project under the Department of Mathematics and Scientific Computing headed by final year mentors.
 - Conceptualize the underlying mathematical algorithms of the **Rendering Equation** and implement a model to simulate **Physical Lighting**.
- 3D Renderer, OpenGL** (October '20- Ongoing)
Self Project
 - A 3D Renderer written in C++ for the OpenGL framework.
 - Established cross-platform functionality for the Renderer to function in both Windows and Linux systems.
 - Implemented the **Blinn-Phong** shading model alongwith **Gamma Correction** and Dynamic Lighting.
 - Integrated third-party libraries such as **ASSIMP** for loading 3d models and **ImGui** for rendering UI.
- The Tests** (September '20)
 - A Platformer/Metroidvania game made in Unity using **C#**.
 - Published as a solo project on **Itch.io** as part of a 3-day Game Jam organized by the campus Gamedev Community.
 - Implemented all the necessary code/art including the platformer **Character Controller**, a custom Smooth Camera and the modular Room Design.
- Participated in multiple Game Jams on Itch.io such as **GMTK Game Jam 2020** and **Brackeys Game Jam 2020.02**.

Technical Skills

- Programming Languages:** C, C++, C#, Java
- Software and Libraries:** Linux, Git, Unity, Godot, Unreal Engine 4, OpenGL, Blender, CMake

Positions of Responsibility

- Student Guide, Counselling Service Team** (2020-21)
 - Guided and mentored **5 freshmen** students in acclimatizing to the Environment of the Institute in an Online setting.
 - Helped them with their academics by arranging meetings with their mentors and still maintain a good rapport with them.
 - Coordinated with the Counselling Service and helped in the organisation of **Orientation Ceremony 2020**.
- Secretary, Game Development Society** (2020-21)
 - Organize various lectures and workshops related to **Game Development** for the Campus Community.
 - Worked on the Club Website and Published Resources to help students in learning Game Development.

Relevant Courses

Fundamentals of Computing Introduction to Electronics(ongoing)	Linear Algebra and Differential Equations Introduction to Game Development(Coursera/Michigan State University)
Intro to Thermodynamics Introduction to Organic Chemistry	Introduction to Biotechnology Introduction to Political Philosophy

Extra-Curricular Activities

- Performed in a Street Play in **Dram-Eve 1 2019** with a team of 30 students.
- Part of the Runner up team in Mime Competition and Second Runner Up in Street Play in **Galaxy'20**, an inter-hall cultural event.