**SANJAY KUMAR**

Ooty, The Nilgiris, TN 643 001

+91 6374201379 | [sanjaykaushik535@gmail.com](mailto:sanjaykaushik535@gmail.com)

**PROFILE**

MSc Mathematics graduate with extensive experience in applying mathematical concepts to game development. Proficient in designing and implementing physics-based puzzles, algorithmic maze generators, and educational games. Skilled in mathematical modeling, algorithm development, and problem-solving. Adept at leveraging mathematical principles to enhance game mechanics and deliver engaging user experiences. Seeking to apply advanced mathematical and analytical skills in a role focused on innovative game design and development.

**EDUCATION**

Government Arts College, Ooty September 2022 – May 2024

Masters in Science, 8.6

• Major in Mathematics, Minor in Statistics, Fuzzy Logic & Optimization Technique

Government Arts College, Ooty August 2019 - July 2022

Bachelor's in Science, 7.6

• Major in Mathematics, Minor in Statistics & Computer Application

**PROJECTS**

**Physics-Based Puzzle Game**

* Designed and developed a physics-based puzzle game incorporating complex mathematical models to simulate realistic physical interactions.
* Utilized principles from mechanics and dynamics to create challenging and engaging gameplay experiences.

**Algorithmic Maze Generator**

* Developed an algorithmic maze generator using advanced algorithms and data structures to create procedurally generated mazes.
* Implemented efficient pathfinding algorithms to enhance maze-solving mechanics and player experience.

**Math Jeopardy**

* Created an educational game based on the Math Jeopardy format to teach mathematical concepts and problem-solving skills.
* Designed questions and game mechanics to align with educational objectives and enhance learning outcomes.

**SKILLS**

* **Mathematical Modeling:** Expertise in applying mathematical theories and algorithms to solve complex problems and enhance game mechanics.
* **Algorithm Development:** Skilled in developing and implementing algorithms for game design, including maze generation and pathfinding
* **Programming Languages:**  Proficient in C, C++, Java, Python, and familiar with Unity for game development.
* **Game Design:** Strong background in designing and developing engaging and mathematically grounded game content.
* **Communication & Collaboration:** Strong communication skills, with experience working effectively in team environments.

**ADDITIONAL EXPERIENCE AND CERTIFICATIONS**

* Certificate in Core Java
* Training on Python Programming
* Actively participated in community service and leadership activities, demonstrating a commitment to social responsibility and teamwork.