# Nisarg Patel

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## SKILLS

- **Programming Languages:** C#, Python, C, C++, Java, R, SQL, JavaScript, Dart
- **Tools:** Unreal Engine, Unity, Blender, Maya, Git, GitHub, Docker, Postman, JIRA
- **Game Development Specific Skills:** Enemy Ai, Particle Systems, Foliage generation, Game Logic Scripting, Debugging
- **Database Systems:** MySQL, MongoDB, Oracle, Microsoft Access and SQL server, Firebase

## EDUCATION

- **Master of Applied Computing**  September 2024 - Present
  University of Windsor • Windsor, ON
  - **GPA: 92.3**

- **Bachelor of Engineering, Computer Science and Engineering**  September 2020 - May 2024
  R.N.G. Patel Institute of Technology • Surat, IN
  - **Cpi: 9.19**

## PROJECTS

- **Jungle Hunt - Zombie Survival Game**  September 2024 - December 2024
  Itch IO: [nisarg-patel.itch.io/jungle-hunt](https://nisarg-patel.itch.io/jungle-hunt)
  - **Technology Stack: AI, Blendspaces, Procedural Terrain Generation, Blueprints, Niagara**
  - Designed and developed a survival gameplay loop that increased player engagement by 30% using dynamic fire zones and resource management.
  - Engineered Zombie AI with state-driven behavior, leading to 50% improvement in enemy response realism through sound and movement detection.
  - Developed a procedural terrain generation system that varied over 100 player spawn locations, enabling re-playability.

- **Project 132**  September 2024 - December 2024
  Unable to provide source due to confidentiality
  - **Technology Stack: Unreal Engine 5, Blueprints, Web UI**
  - Integrated a WebView for seamless Microsoft Office access within the game environment, streamlining in-game document handling and ramping productivity by 25
  - Oversaw the complete integration of the project, ensuring smooth interaction between all systems and mechanics.
  - Coordinated multiple user tests and, fine-tuned WebView integration to reach a positive user experience rating of 95%.
  - Managed a team of 4 developers, streamlined workflows to reduce development time by 20% compared to initial estimates.

- **3D Game Engine**  August 2023 - September 2023
  GitHub: [github.com/Nisarg1463/3d_Engine](https://github.com/Nisarg1463/3d_Engine)
  - **Technology Stack: PyGame, Modern GL**
  - Built a lightweight 3D rendering engine, achieving 60+ FPS performance on mid-range hardware.
  - Created custom shader programs, increasing rendering efficiency by 35% and introducing skyboxes and dynamic lighting.
  - Implemented a modular class architecture, reducing code redundancy by 30% and optimizing maintainability.
  - Optimized vertex buffer objects (VBOs) and vertex array objects (VAOs), upgrading the rendering speed by 50% and enhancing the overall graphical performance.

## EXTRACURRICULAR ACTIVITIES

- **Game Development Workshop Series**  January 2025 - Present
  University of Windsor
  - Organized a 9-week Unreal Engine 5 workshop, guiding 20+ participants in game development, level design, and Blueprints, resulting in a 90% participant retention rate.
  - Planned and delivered hands-on training in character setup, AI behavior, and gameplay mechanics, boosting participant proficiency by 70% based on feedback and project evaluations.
  - Led attendees in developing interactive UI elements, optimizing levels, and implementing game logic, resulting in the creation of 10+ playable game prototypes.

- **GDSC Core Member** September 2023 - May 2024
R.N.G. Patel Institute of Technology
  ◦ Served as an active member of Google Developer Student Clubs (GDSC), contributing to event planning and community engagement.
  ◦ Helped organize 10+ technical workshops and hackathons, facilitating sessions on emerging technologies for 100+ participants.
  ◦ Teamed up with speakers and teams to ensure smooth execution of events, improving participation and outreach.

## OTHER WORK EXPERIENCE

- **Computer and technology instructor** July 2024 - August 2024
Sardar Patel English Medium School • Ena, IN
  ◦ **Topics: HTML, C**
  ◦ Volunteered as a Computer instructor for 10th-grade students, providing free education as part of a charity initiative.
  ◦ Conducted daily classes and hands-on lab sessions, covering 75% of the syllabus within 1.5 months.
  ◦ Enhanced student understanding of programming and computer science fundamentals, leading to an average score of 90% on their exams.
  ◦ Fostered a supportive learning environment, encouraging students to develop problem solving skills and confidence in technology.

- **Full Stack Developer Intern** January 2024 - April 2024
L&T Heavy Engineering • Surat, IN
  ◦ **Technology Stack: Mendix, ASP.Net, MVC Architecture, MSSQL Database**
  ◦ Worked as an intern on migrating the development pipeline from ASP.NET to Mendix, streamlining the transition to a low-code platform.
  ◦ Reduced page loading time by 50% and, enhanced user experience.
  ◦ Coordinated with cross-functional teams, including developers, designers, and the network team, to ensure smooth migration and alignment with project goals.

## HONORS AND AWARDS

- **Best Presentation - Demo Day** December 2024
University of Windsor
  ◦ Earned the Best Presentation award on Demo Day for effectively showcasing a self-designed game and, highlighting its game design, mechanics, and innovation.

## ADDITIONAL INFORMATION

**Languages:** English (Professional Proficiency) , Gujarati (Native), Hindi (Native)
**Video Games:** NFS Most Wanted 2005 and 2012, Cricket 07, FIFA 14, Battlefield 4, Call of Duty Black OPS 2, GTA V
**Sports:** Formula1, Volleyball, Badminton
**Interests:** Cubes and Puzzles, Adventure Sports, Bike Riding, Road Trips