# Archit Vishnoi

**Portfolio:** https://v-archit.github.io | **Location:** Rochester, NY
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## Skills

**5+ Years** Unity Engine, C#, Data Structures, 3D Mathematics, Visual Studio, Logic, Scripting, Windows.
**3+ Years** in Unreal Engine, C++, Jira, GitHub, .NET programming, Android, Performance Optimization.
**1+ Years** OpenGL, DirectX, HLSL, Perforce, Trello, Engine Programming, Agile Development, iOS Publishing.

## Experience

**Vizara Technologies Pvt Ltd, Gurugram, India** **May 2019 – Jun 2021**
*Computer Graphics Engineer*

- Spearheaded the end-to-end product development lifecycle for innovative applications, including *Digital Gandhi Akar Prakar* and *ChariotVR*, achieving successful launches on the Google Play Store and Apple App Store.
- Boosted the Museum AR app's stability by 20% through memory optimization and resolving unreferenced co-routines, leveraging Unity Profiler to diagnose and address performance bottlenecks.
- Acted as **Scrum Master**, driving Agile adoption by leading sprint planning, facilitating team collaboration, resolving conflicts, and ensuring seamless communication using Jira.
- Achieved timely goals with a 95% completion rate and translated user stories into actionable sprint tasks.
- Mentored a team of 3D artists, optimizing GPU-intensive rendering processes for STL and FBX models in Unity3D, improving rendering efficiency and performance.
- Represented Vizara at **international events**, including the India International Science Festival 2019, and Unity Developer Conference 2020, showcasing products to a diverse audience and fostering industry connections.

**Indian Institute of Technology, Delhi, India** **Aug 2018 – Apr 2019**
*Research Fellow*

- Engineered 3D visualization techniques in Unity3D, resulting in a 50% improvement in user immersiveness.
- Led the development of ‘Digital Mini Spectacle’, an interactive software project funded by the Ministry of Science.

**Absentia Virtual Reality Pvt Ltd, Bangalore, India** **June 2017 – July 2017**
*Game Developer Intern*

- Enhanced the 'Norah AI' engine by implementing automated building-spawning algorithms on Unity3D terrains.
- Accelerated the testing pipeline by 75% through the development of an automated I/O-based tool in Unity using C#, streamlining debugging and iteration processes.

## Projects

**Into The Babyverse – 3D Space Shooter Game – Unreal C++** **M.S. 4th Sem**

- Created a 6-degree-of-freedom spaceship system, custom hit physics, and a Chaos destruction framework
- Designed and implemented a **Dynamic Spline Management** system for object picking, achieving a 25% reduction in rendering time, and improving performance efficiency.
- Utilized **Agile methodology** in processes, including maintaining a comprehensive Game Design Document and conducting **iterative** evaluations through Sprints, ensuring consistent project alignment and timely delivery.

**Hoodwink (Group) – 3D Wild West Action Game – Unreal C++** **M.S. 3rd Sem**

- Designed and implemented dynamic AI systems for Townsfolk NPCs, including patrolling, chasing, melee combat, and fleeing behaviors, improving gameplay realism by 30%.
- Developed and optimized Behavior Trees (BT) with custom BT Tasks, Decorators, and multi-sensory Perception Graphs (audio, visual, and touch) to enhance NPC decision-making and interactivity.

**The AI Story (Group) – 2D Narrative Game – Unity C# Inky** **M.S. 2nd Sem**

- Led development of programming, UI, logic creation, and dialogue systems, and improved functionality.
- Streamlined team communication, boosting collaboration and reducing project timelines by 15%.

**Tower Defense – 2D Realtime Strategy Game – Unity C#** **M.S. 1st Sem**

- Redesigned and optimized Goal-Oriented Action Planning (GOAP) AI, improving decision-making efficiency by 25% to achieve optimal win conditions in a real-time strategy (RTS) game.
- Enhanced AI to prioritize battles dynamically, increasing resource utilization and optimizing capacity deployment.
- Engineered a **scalable multi-troop battle system** with robust kill-update management, ensuring 100% accuracy in combat status tracking and reducing processing latency.

## Education

***M.S. Game Design Development*** **(3.6/4.0 GPA)** **Aug 2021 – Dec 2023**
Rochester Institute of Technology, Rochester, NY

- Key coursework: Game Development Process, Engine and Graphics Programming, and AI.

***B.Tech. Computer Science Engineering*** **(7.2/10.0 CGPA)** **Aug 2014 – May 2018**
Jaypee Institute of Information Technology, Noida, India