

Bharath Kumar

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TECHNICAL SKILLS

Engines: Unity

Languages & Technologies: C#, C++, Python, Java, C, SQL, JavaScript, React

Networking & XR: Netcode for GameObjects, Photon Engine, AR/VR/MR Development

Game Development: Internal Tools Development, Shader Graphs, Optimization

AI: Reinforcement Learning, Unity ML Agents

Tools & Architecture: Git, GitHub, CI/CD Pipelines, Unity Version Control, SOLID, Design Patterns

EDUCATION

Manipal Institute of Technology

Bachelor of Technology in Computer Science

Specialization: AI & Machine Learning

Manipal, India

Sep. 2022 – May 2026

EXPERIENCE

Game Developer (Unity)

March – May 2026

Lila Games (Role concluded after project cancellation during a company-wide downsizing)

Bangalore, India

- Built the FTUE tutorial for Lila BLACK, a **multiplayer mobile extraction shooter**, to improve Day 1 retention
- Built internal tools to automate localization workflows and validate **thousands of game configuration entries**
- Implemented UI for the Missions system, integrating multiple data sources to display dynamic objectives, rewards, and player progress
- Fixed bugs across networking, UI, and combat

Unity AR Developer Intern

June – Aug. 2025

Honeywell International, Inc. (via Andor Tech)

Bangalore, India

- Built a cross-platform AR remote assistance app in Unity using ARFoundation and WebRTC
- Replaced the Agora SDK with a custom Node.js signalling server, cutting streaming costs by nearly **98%**
- Streamed the AR camera feed to enable video calling, and synchronized hundreds of spatial data points using a custom codec with local reconstruction, avoiding the continuous transmission of annotation data

Unity Head

Apr. 2024 – May 2025

Project V.ARISE (VR Club in University)

Manipal, India

- Led the Unity team at Project V.ARISE, overseeing work distribution and project planning for a team of 10 developers
- Conducted code reviews, mentored developers, and led technical workshops
- Led major projects (see *PhobiaXR* and *VR Flight Simulator* under *Projects*)

Game Developer Freelancer

Nov. 2024 – Feb. 2025

BoaXR

Remote

- Freelance developer for "Wallball", a Mixed Reality shooting game
- Implemented core gameplay mechanics and developed custom debugging tools to streamline development
- Fixed bugs across all areas of the game, including level design, enemy behaviour, UI, and animations

Game Developer Intern

May – July 2024

Red Panda Games

Remote

- Developed a reusable tutorial system and implemented four in-game tutorials for a mobile RTS multiplayer game
- Worked on multiplayer networking and contributed to troop AI, spawning systems, UI, and cutscenes
- Resolved cross-system bugs involving Firebase integration, building logic, and game flow

PROJECTS

The Outpost (RL)  (Solo developer) | *Unity, C#, ML Agents, Reinforcement Learning* Sept. – Nov. 2025
Third-person shooter

- Developed an RL-based third person shooter where agents learn navigation, aiming, and combat using Unity ML Agents
- Built staged training environments with tuned rewards, action masking, and curriculum-based progression for stable learning
- Added gameplay polish through camera shake, hit effects, muzzle flashes, post-processing, and layered character animations

PhobiaXR  (Team Lead) | *Unity, C#, XR SDKs, Python, OpenCV* Dec. 2024 – Feb. 2025

- Ideated, designed, and developed a VR-based phobia exposure therapy simulation
- Integrated real-time heart rate data from smartwatches to dynamically adjust in-game environmental intensity based on user stress levels
- Finished in the **Top 1%** out of **2200+** submissions at the **All India XR Creator Hackathon 2024-25**

VR Flight Simulator  (Technical Lead) | *Unity, C#, XR SDKs, Cesium for Unity* March – Oct. 2024

- Led the development of a VR Flight Simulator in collaboration with the Aeronautical Department at MIT, Manipal, guiding users through startup, takeoff, cruising, and landing procedures
- Handled team leadership, work distribution, and presented project specifications to the university's board of directors, securing funding for research and development
- Implemented realistic flight physics and cockpit interactions, including buttons, levers, and external joystick input
- Developed a modular, ScriptableObject-based state machine to guide player progression and interactions
- **Optimized performance** using LOD, occlusion culling, and shifting origin for large-scale terrain rendering

Zombona  (Solo Developer) | *Unity, C#* Feb. 2022

Third-person zombie shooter. Won 'Best Gameplay' at the International Peanut Jam 2022 

- Built a third-person shooter with modular weapon, inventory, and power-up systems
- Developed enemy and ally AI with combat, support, and pathfinding behaviours
- Integrated dynamic audio and post-processing based on player health

Pressure Point  (Solo Developer, Published on Play Store) | *Unity, C#* Nov. 2020 – March 2021

Hypercasual mobile game

- Developed and released a hypercasual game with Story and Endless modes
- Implemented progression, shops, power-ups, and 300+ skins
- Integrated Unity Ads and in-app purchases for monetization

AWARDS

- **Top 1% (2200+ submissions) - All India XR Creator Hackathon 2024-25**
3 month long national-level competition. Led the development of PhobiaXR (see under *Projects*)
- **Research Publication (Co-author, under review)**
Co-authored a research paper on VR-based visual acuity estimation by developing the accompanying simulator.
- **Best Gameplay - International Peanut Game Jam 2022**
Developed an isometric third person shooter, *Zombona* (visible [here](#))
- **Published *Pressure Point* on the Google Play Store, 2021**
A hypercasual single-tap game (see under *Projects*)
- **First Prize - GameJamTitans 2016**
Statewide competition hosted by Design Championship. Won tickets to attend the NASSCOM Game Developers Conference 2016