BODAPATI VISHNU SAI VARDHAN

bvsv2009@gmail.com +1 (919) 323-5905 LinkedIn Profile

EDUCATION

UNIVERSITY OF WOLLONGONG **Sept 2021 - Sept 2024**

Bachelor of Computer Science (Game and Mobile Development)

- Key courses studied: Game Engine Essentials, IT Project Management, VR/AR Game Development, Interactive Computer Graphics, Software Development Methodologies, Mobile Application Development

Duke University **Aug 2025 - Present**

Master of Engineering (Game Design, Development and Innovation)

- Key courses studied: Advanced Game Design, Unreal Engine Development, C++ Programming

EXPERIENCE

Freelance Research Analyst - Singapore Gaming & Graphics Startup Ecosystem (and Other Sectors) | Exelvision IT Labs LLP. **Oct 2024 - Dec 2024**

- Conducted in-depth market research and analysis within the gaming and graphics startup ecosystem, as well as Robotics, 3D Modelling, VR/AR Development and Artificial Intelligence.
- Compiled industry trends, startup performance metrics, and investment activity in various sectors.
- Produced in-depth, data-driven reports that informed key strategic decisions and supported business development initiatives for clients in diverse industries.
- Identified and analyzed market opportunities, evaluating competitor strategies and emerging trends in the gaming, graphics, and other tech-driven industries.
- Developed sector-specific insights by evaluating regulatory, technological, and economic factors, enabling businesses to navigate complex market environments.

Research Assistant — Duke Intelligent Interactive Internet of Things (I^3T) Lab| VR Gameplay & Research Developer

Duke University ***Oct 2025 - Present***

- Contributed to the development of a VR-based rehabilitation game for ICU patients, designed to support mobility recovery through guided interactive experiences.
- Implemented and iterated on VR gameplay mechanics focused on accessibility, smooth interaction, and patient comfort.
- Worked on optimizing frame rate stability, input responsiveness, and interaction smoothness to reduce motion/cybersickness in clinical VR settings.
- Collaborated with researchers and developers to translate clinical and research requirements into usable gameplay and interaction systems.
- Assisted with testing and refinement of VR interactions to ensure reliability across repeated sessions and constrained patient movement scenarios.

NOTABLE ACADEMIC PROJECTS

https://github.com/VSVwnl

Hand Gesture-Based Game (Meteor Mayhem)

- Developed an innovative game using hand gesture recognition to control in-game actions. Utilized Python for gesture detection and Unity for game development.
- Implemented real-time gesture detection and processing to ensure seamless gameplay.
- Created a user-friendly interface and enhanced player experience by integrating natural gesture controls.

First-Person Shooter Game

- Designed and developed a first-person shooter (FPS) game in Unity, focusing on smooth gameplay mechanics and immersive environments.
- Implemented shooting mechanics, enemy AI, and weapon systems, using C# for scripting and Unity's physics engine for realistic interactions.
- Optimized game performance and integrated dynamic lighting and sound effects to enhance the gaming experience.

Virtual Reality Maze

- Created an immersive VR maze game where players navigate through complex environments using a VR headset.
- Designed challenging levels with increasing difficulty, leveraging Unity and C# to create engaging and interactive gameplay.
- Integrated spatial audio and haptic feedback to enhance the player's sense of immersion.

Interactable Room in Virtual Reality

- Developed a VR experience that allows users to interact with various objects in a virtual room environment.
- Implemented realistic physics and object interaction using Unity and C#, enabling users to pick up, move, and manipulate virtual objects.
- Designed intuitive VR controls and user interfaces to create a seamless and engaging experience.

Overpriced (GameJam) – Audio Programmer | Gameplay Programmer **November 2025**

- Implemented the core audio integration pipeline in Unreal Engine, including sound cue setup, event triggering, and contextual audio feedback tied to gameplay interactions.
- Programmed gameplay interaction logic enabling player–environment connectivity, supporting puzzle flow and level progression.
- Integrated audio feedback with gameplay states to reinforce player actions and improve moment-to-moment responsiveness.
- Collaborated closely with level designers and gameplay programmers to ensure audio systems aligned with mechanics and player intent.
- Debugged and iterated on gameplay and audio behavior to maintain consistency across editor and packaged builds.

Tower Of Tricks – UI Programmer | Build & Debugging **August 2025 – December 2025**

- Designed and implemented game UI systems including menus, HUD elements, and player-facing feedback components.
- Debugged and resolved editor vs packaged build discrepancies, identifying issues where gameplay elements functioned in-editor but failed in packaged builds.
- Managed packaging and deployment configuration, ensuring all required maps and assets were correctly included during the build process.
- Investigated and fixed build-time and runtime issues related to level loading, asset references, and initialization order.
- Performed systematic playtesting and QA across multiple builds, validating gameplay, UI behavior, and stability in packaged executables.

Hungry Owl - Sole Developer | Gameplay, Systems, UI **August 2025 – December 2025**

- Designed and developed a complete game from scratch for the Playdate console, owning all gameplay, systems, UI, and logic implementation.
- Implemented core gameplay mechanics including player control, enemy behavior, scoring, difficulty progression, and game state management.
- Built modular systems for player stats, enemy interactions, and level flow to support iteration and scalability.
- Integrated hardware-specific input using the Playdate crank and buttons, mapping physical input to responsive in-game actions.
- Developed UI flows including menus, game states, feedback systems, and win/lose conditions.
- Iteratively tested, debugged, and polished gameplay to ensure stability, responsiveness, and player clarity on constrained hardware.

ADDITIONAL

- **Certifications**: Young AI Pro Training Program - Advanced AI & LLM Techniques (2024, Mitra Robot), Game Development With Unity (2020, MAGES Institute of Excellence), Professional Remote Pilot License Program (2019, Ace Aviation), UI Design Course (2020, Udemy), User Experience (UX): The Ultimate Guide to Usability and UX (2020, Udemy)
- **Technical Skills**: Unity, Android Studio, MySQL, Python, C#, Java, Javascript
- **Entrepreneur Society Captain -** In Charge of FundRaising and other events. (2018)

PERSONAL INFORMATION

- **Nationality**: Singaporean
- **Languages**: English (Fluent), Telugu, Hindi