Upamanyu Yavalkar

Technical Game Designer

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About

Adaptable and deeply knowledgeable technical game designer with 6+ years of experience consistently mastering and applying diverse game development skills. Proficient in player-centered design, cutting-edge technologies, and object-oriented programming, with a strong commitment to continuous learning and innovation.

Experience

Technical Game Designer - Contract, S-Qubed Entertainment – Toronto,ON   October 2024 – Present

- Designing concepts and developing robust systems within the existing game architecture in Unity C#
- Researching and integrating algorithms to increase the efficiency of gameplay
- Researching and prototyping gameplay logic and mechanics that align with the overall game vision
- Collaborating with the client's engineering team to provide support with ongoing tasks
- Integrating art assets like 3D models and animations to complete the client's milestone goals
- Created Paper Level Designs incorporating skills and obstacles
- Designed and implemented Enemy Behaviours using state machines
- Architectured a Grid system for a tower defense mechanic

Programmer - Contract, Think! Wireless Solutions – Toronto, CA   Jan 2024 – Dec 2024

- Designed software architecture for the backend server
- Integrated map APIs that best fit the project requirements prioritizing quick execution and scalability. Interfaced with OpenStreetMaps
- Programmed server logic using Python - managing JWT verification, Beats creation and Admin(web)(REACT js) - Frontend(Unity)(CSharp) communications using WebSockets
- Calculated routing data using the Chinese Postman algorithm
- Created and managed the Postgres Database using Django
- Participated in team calls with client to understand and develop on the provided feedback

Lead Designer and Programmer - Contract, George Brown College and McMaster   Sep 2023 – Jan 2024
University – Toronto, CA

- Defined gameplay systems for 5 educational games
- Designed the games for universal appeal and engaging player experiences
- Mentored and lead a team of undergrad programmers to design and implement game features
- Researched and Solved design problems

Unreal Engine Specialist - Contract, LORR Metaverse – Remote, USA   Sep 2022 – Mar 2023

- Built the first MVP using Unreal Engine 5, Third-Person interactions in a life-sim genre
- Designed and implemented user interactions for PC and mobile platforms
- Created a Blueprint system to trigger Shopify API calls from within the UE game at runtime
- Researched code architecture techniques to balance performance
- Architectured the workflow pipeline for artists increasing efficiency
- Implemented SFX and Music within the Engine

Game Designer/Project Manager - Contract, Aarquie Solutions – Remote, USA   Sep 2022 – Aug 2023

- Creating tech and design documents for 6 freelance projects across various genres
- Sketching mock-ups for the UI screens and iterating after UX testing

- Client-facing role to achieve expectations of engagement and scope management
- Scheduled production calendars, and bug tracking using Trello
- Researched and Solved player-centric design problems - 3Cs, Resource Balancing, Skill - Obstacle analysis, etc.

Unity Game Programmer - Contract, KABOOM Entertainment Inc – Pune, India   Aug 2022 – Sept 2022
- Programmed player controller and level design scripts in Unity C#
- Redesigned 10 levels from the original game
- Cloned a popular Android game in Unity on client requirements
- Integrated asset packs purchased and created levels for the game
- Documented original game and client requirements

Game Designer/ Creative Programmer - Full Time, Ronin Labs – Pune, India   Sep 2019 – Jun 2022
- Conceptualized simple, creative and engaging games and experiences as per client briefs demonstrating attention to detail
- Shipped over 25 projects with optimized build packages in Unity, VR, Web, AR platforms, and IoT
- Designed repeatable workflow pipelines for the production of different projects
- Iterated on UX designs based on testing and client feedback
- Fire-fighting production problems across projects, implementing crisis-averting methods
- Collaborated with other teams using tools like GitHub, Trello, etc. to manage projects and integrate assets
- Integrated Google analytics to track player performance

Education

George Brown College, Postgraduate Diploma in Game Design   Sept 2023 – Aug 2024
- GPA: 3.96/4.0
- Awards: Narrative Game Designer of 2024
- **Coursework:** Game Theory and Psychology, Level Design, Narrative Design, Game Business and Management

Full Sail University, Bachelor of Science in Game Development   May 2016 – May 2018
- GPA: 3.29/4.0
- Awards: The National Society of Collegiate Scholars [NSCS and Full Sail University]
- **Coursework:** Data Structures and Algorithms, Linear Algebra, Applied Human-Computer Interaction, Graphics Programming and Game Networking

Projects

Fair Fortunes [UE5] - Project Lead   GitHub

Fair Fortunes is a 3rd Person Stealth Action game, you navigate through dynamic crowds in a dense market to steal candy while avoiding the clowns. Build the highest score and become a legend. Built with Unreal Engine 5, Blueprints and C++.

- Built the MVP in UE5 utilizing Blueprints
- Designed and Implemented the Player Mechanics. Tools include a water pistol, firecrackers, and a Helldivers 2 inspired Interaction System
- Used Behaviour Tree to design the Clown AI states
- Researched and Implemented UE5's Mass AI Plugin to simulate optimized crowds(ECS)
- Experimented with Motion Matching features, adapting our custom skeleton to UE5's skeleton
- Level Designed on paper before implementing block-outs in-engine with Geometry tools, performing an asset pass with Marketplace Assets
- Lighting the scene with Good Sky, skybox asset on the Marketplace
- Fair Fortunes was our Toronto Level Up Competition entry for 2024. We got past 2 rounds for Art and Tech
- Currently converting Blueprints to C++ Components for player mechanics
- Conducted public playtests to collect player telemetry data and test mechanics

Remorse [UE5] - Project Lead Jan 2025 - Present

Remorse is a first-person horror narrative-driven game that focuses on combat and solving puzzles. Indie dev approach to development: building, testing, and reevaluating designs.

- Architectured C++ Subsystems for Game Logic, AI spawns and Scripted Events
- Implemented an interaction system using Blueprints
- Designed the Game Level on paper and implemented a block out using UE geometry tools
- Researched and currently implementing WWise for Music and SFX

Carpe Dino: Seize The Date - Writer - SHIPPED STEAM

Carpe Dino: Seize The Date is a pre-apocalyptic dating sim on Steam. Build relationships with 8 characters, both romance-able and non-romance-able, and conquer challenging minigames.

- Conceptualized Story and Character beats in Narrative Design
- Wrote over 100s of lines of dialogues for "Crow", one of the main Romance-able characters
- Used Google Suite of apps and YarnSpinner to compose game content

Purple [UE5] - Tech Lead May 2024 - Present

Purple is a Action Adventure game built using UE5, you control 2 characters with an alternative controller layout, that can merge-split to solve level design puzzles. Purple is built entirely using Blueprints.

- Lead the programming team of undergrad programmers, demonstrating teaching skills and designing reusable and generalizable Blueprints
- Conducted Blueprint reviews, documented design architecture and provided mentorship to programmers new to Unreal Engine
- Worked in a cross-disciplinary team to complete sprints of development while working towards release

Skills

Languages: C#, C++, JavaScript, Python, Java

Technologies: Unreal Engine 5, Unity Engine, Twine, DirectX, SteamVR/Oculus SDK, Tweine/Yarn Spinner, UE Blueprints, Django, Websockets, RestAPI.

Workflow: Google Suite, Jira/Trello/Asana, Miro/Figma/Milanote, Adobe CC Apps, TouchDesigner, Snap Lens Studio, Meta SparkAR.

Volunteer Experience

Program Representative Volunteer October 2024
George Brown College

- Represented GBC at the Ontario College Information Fair
- Presented Projects from the Game Programs to prospective students

References

Shared upon Request