

# Upamanyu Yavalkar

## Game Programmer

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### About

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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

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**Game Programmer and Designer - Contract**, S-Qubed Entertainment – October 2024 – Present  
Toronto, ON

- 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
- Designed and implemented Enemy and MiniBoss Behaviours using state machines
- Architected a Grid system for a tower defense mechanic
- Created Paper Level Designs incorporating skills and obstacles
- Integrating art assets like 3D models and animations to complete the client's milestone goals

**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 University – Toronto, CA Sep 2023 – Jan 2024

- 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
- Architected 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.

- Architected 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**

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

**Technologies:** Unreal Engine 5, Unity Engine, Twine, DirectX, SteamVR/Oculus SDK, Twine/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**

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### **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**

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Shared upon Request