Yuvraj Kumpavat

Generalist / Gameplay Programmer
LinkedIn GitHub Portfolio

Professional Overview:

Recent BS (Hons) Games Design and Programming graduate with strong expertise in C, C++, Python and Unreal Engine. Demonstrated leadership experience in a collaborative games development team and proven ability to architect complex gameplay systems from concept to implementation. Skilled in physics programming, team coordination, and cross-platform development.

Work Experience:

Unreal Racing Physics | Final Year Project | 2023-2024

- Developed a comprehensive racing physics system from scratch supporting multiple drivetrain configurations (AWD, FWD, RWD)
- Developed modular transmission with customizable gear ratios and RPM parameters
- Currently refactoring entire system from Blueprints to C++ for enhanced performance optimization over Chaos Vehicle Physics
- Breakdown of my vehicle physics system.

Twin Flames | Ancient Snail Game Studios | Team: 28 members | Duration: 9 weeks

- Led a team and coordinated juniors from programming department to deliver features aligned with individual skill sets.
- Developed local co-op puzzle platformer featuring dual-character mechanics and environmental interaction systems.
- Implemented complex player animation blueprint system with state management and transition logic.
- Participated in cross-functional meetings with leads from other departments and academic supervisors to ensure project milestones.
- Successfully delivered completed game within academic timeline constraints.

Bubba Gramp | BigMode Game Jam 2025 | Global Games Jam 2025

- Designed and implemented gameplay mechanics for 3D platformer set in fragmented dreamscape environment.
- Collaborated closely with level design team to ensure mechanics integrated seamlessly with environmental storytelling.
- Delivered functional prototype meeting all jam requirements and theme constraints.

Climate Crusaders | STARs Summer Research Programmed 2023 | Researcher & Programmer

- Selected for university research program focusing on climate change education through interactive media.
- Developed educational game set in 1980s exploring climate change discussions and solution-founding.
- Utilized Bitsy game editor for rapid prototyping, extending functionality through custom JavaScript implementation
- Designed complex puzzle mechanics and visual systems beyond standard editor capabilities.

Technical Skills:

Programming Languages:

- Primary: C, C++, Python
- Secondary: JavaScript, HTML, CSS, C#
- Game Scripting: Unreal Engine Blueprints

Game Development:

- Engines: Unity, Unreal Engine
- Specializations: Physics programming, Animation systems, Co-op gameplay mechanics
- Tools: Git/GitHub, Vim, Command Line Interface

Development Environment:

- Primary OS: Linux
- Secondary OS: Windows
- Version Control: Git workflow and collaborative development

Education:

BS (Hons) Games Design and Programming

University of Staffordshire | 2022 - 2025

Core Competencies:

Technical Leadership:

- Experience managing junior developers and coordinating technical implementations
- Proven ability to break down complex systems into manageable development tasks

Systems Programming:

- Strong foundation in low-level programming
- Experience with physics simulation and real-time system architecture

Cross-Platform Development:

- Proficient in multiple operating systems and development environments
- Adaptable to various game engines and programming paradigms

Problem-Solving:

- Demonstrated ability to tackle complex technical challenges across different project types
- Experience with both rapid prototyping and long-term system architecture