

# Game Development with Python(Online)

Learn to Build Engaging 2D and 3D Games Using Python and Pygame Framework

## WHAT YOU'LL LEARN

- Understand the core concepts of game development, including game loops, events, and collision detection
- Build 2D and 3D games from scratch using Python and the Pygame framework.
- Implement interactive game mechanics, animations, and sound effects to enhance user experience.
- Design, develop, and deploy simple games, learning key aspects of game programming like physics, AI, and rendering.

#### REQUIREMENTS

Basic knowledge of Python programming and an interest in game design.

A computer with Python installed along with the Pygame library.

A passion for creativity and a desire to create interactive games.

## WHO'S THIS COURSE IS FOR

Students, hobbyists, and developers eager to dive into game design and programming.

Entrepreneurs and developers looking to create their own games for personal projects or business.

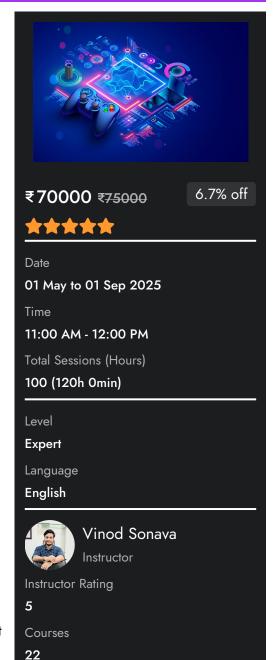
#### **DESCRIPTION**

The "Game Development with Python" course is a hands-on program that introduces students to the exciting world of game development. Using Python and the Pygame library, students will learn how to design and develop their own 2D games from scratch. The course covers everything from the basics of game loops and collision detection to more advanced topics like AI and game physics.

## Course Duration and Schedule

• Total Duration: 4 Month

• Start Date: Option to start today also, instructor will adjust you to



### recently started batch. Enroll now

• Weekly Schedule: 5 days a week (Monday to Friday)

• Session Length: 2 hours per session.

• Total Sessions: 100 sessions (120 hours).

• Timings: 10:00 am to 12:00 pm

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## Module 1: Introduction to Game Development

- Understanding game development and its core principles.
- Overview of Python and Pygame for game development.
- Setting up the development environment.

## Module 2: Game Design Fundamentals

- Understanding game loops and event handling.
- Working with sprites, graphics, and animations.
- Handling user input (keyboard and mouse events).

# Module 3: Adding Game Elements

- Implementing sound effects and background music.
- Collision detection and handling game interactions.
- Creating and managing different game scenes.

#### Module 4: Advanced Game Mechanics

- Introduction to game physics (gravity, velocity, acceleration).
- Implementing AI for Non-Player Characters (NPCs).
- Creating power-ups, enemies, and interactive elements.

# Module 5: Optimizing and Enhancing Gameplay

- Improving performance and optimizing game speed.
- Debugging and fixing common game development issues.
- Enhancing user experience with UI elements and visual effects.

#### Module 6: Deploying Your Game

- Exporting games to different platforms.
- Sharing your game with others.
- Introduction to game monetization strategies.

By the end of this course, students will have the knowledge and skills to build and deploy their own interactive 2D games. Whether you want to create fun personal projects, start a career in game development, or launch your own indie game, this course will set you on the right path.