# Sushant Payal

mail@sushantp.me| 9960227138 | Pune, MH Github:sushant-demn

## EDUCATION

**International Institute Of Information Technology, SPPU** **2023-Present**
Bachelor of Engineering, Information Technology **GPA: 7.8**

## Projects

**Sustify-Hi-Res Audio Player** (Miniaudio, WebView, Tag Lib, Portable File Dialogs, C++)

- Developed a high-fidelity desktop application supporting lossless and compressed formats such as FLAC, WAV, MP3.
- Built a low-latency audio engine utilizing the Miniaudio API to handle real-time state management, precise track seeking, and continuous playback.
- Bridged native backend logic with a responsive, web-based UI via WebView, incorporating Portable File Dialogs for native cross-platform file selection
- Integrated TagLib for dynamic metadata extraction, parsing and displaying embedded ID3 tags (artist, album, track title) in real time.
- Architected a robust linear queueing data structure to manage track sequencing and ensure seamless audio transitions.

**Pacman: The Hunt Protocol** (Unity Engine, Photon PUN, C#)

- Developed a 2D Multiplayer Game inspired by Pacman using Unity engine and C#.
- Integrated Photon PUN to handle real-time multiplayer networking, lobby and player state synchronization.
- Developed a 2D grid based movement system utilizing BoxCast for precise collision detection and physics interactions.
- Built dynamic and scalable level architecture leveraging Unity Tilemap creation tools.
- Implemented responsive UI elements and real-time spatial tracking indicators for player avatars.

**Residential Security System** (C++, Arduino, Raspberry pi, ESP32, MySQL, ReactJS, NodeJS)

- Architected a dual-layer IoT using Raspberry Pi as a central server and Arduino UNO for Sensor data acquisition.
- Implemented a real-time alert subsystem that pushes instant security notification using telegram api upon threat detection.
- Engineered a live video surveillance feed using the Raspberry Pi Camera Module and old smart-phones as remote cameras, accessible remotely through web interface.
- Developed a full-stack web dashboard using Node JS and MySQL to visualize realtime sensor data and manage security logs.

## Technical Skills

**Languages:** C++, C#, Java, JavaScript, MySQL
**Frameworks & Libraries:** ReactJS, Node.js, Photon PUN, TagLib, Miniaudio, WebView.
**Tools & Hardware:** Unity Engine, Visual Studio IDE, Arduino, Raspberry Pi, ESP32, Ubuntu Server, Git, Github, Microsoft Azure.

## Achievements

**Runners-Up Game X Innovate: Hacksprint v7.0**

- Organised by MMCOE karvenagar and Zensar Technologies.
- Developed a multiplayer 2D game under 24Hrs with Unity Engine and Photon PUN framework.
- Secured Runner-Up Position out of 50+ teams at National Level.