# Smart Entry System Code

This repository contains the code for the Smart Entry System project.

## Python Programming

- `smart\_entry\_system\_main.py`: Main script for the Smart Entry System.

- `utilities/`: Folder containing utility functions.

- `helper\_functions.py`: Helper functions for the system.

## OpenCV

- `face\_detection\_module.py`: Module for face detection.

- `image\_processing\_module.py`: Module for image processing tasks.

## TensorFlow and Keras

- `facial\_recognition\_model.py`: Module for facial recognition using TensorFlow and Keras.

- `neural\_network\_training.py`: Script for training neural networks.

## SQLite Database

- `database\_operations.py`: Script for database operations.

- `smart\_entry\_system\_db.sqlite`: SQLite database for storing facial information and attendance data.

## Research Findings

- `research\_paper\_1.pdf`: Relevant research paper on AI-enhanced entry management systems.

- `research\_paper\_2.pdf`: Another research paper supporting the use of facial recognition technology.

## Usage

To run the Smart Entry System, ensure you have the required dependencies installed. Modify the configuration files as needed and execute the main script:

```bash

python Python\_Programming/smart\_entry\_system\_main.py