DRIVER DROWSINESS

DETECTION SYSTEM

PRESENTATION
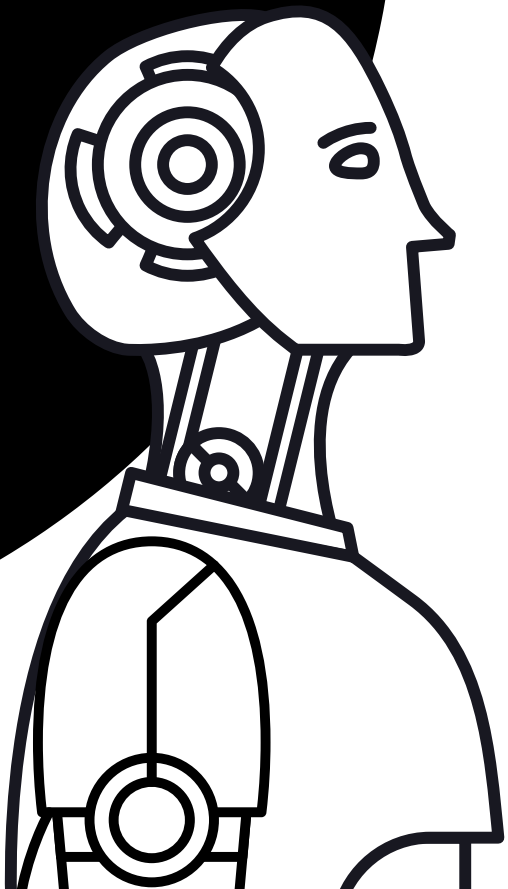
CONTENTS
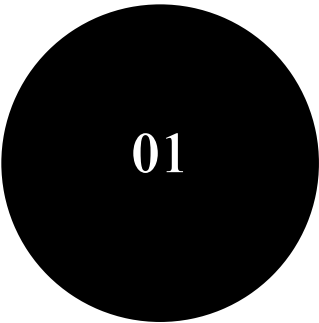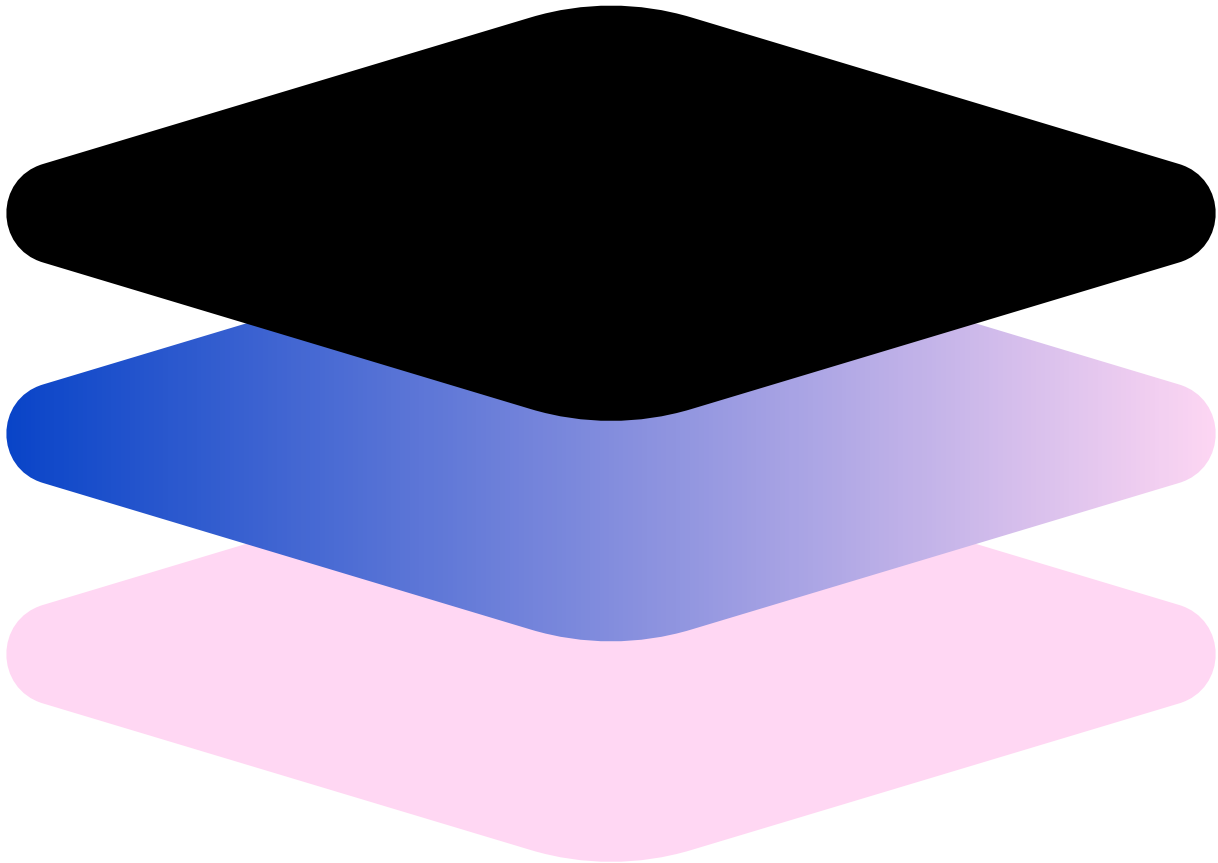
IOT CLASS

CONTENTS
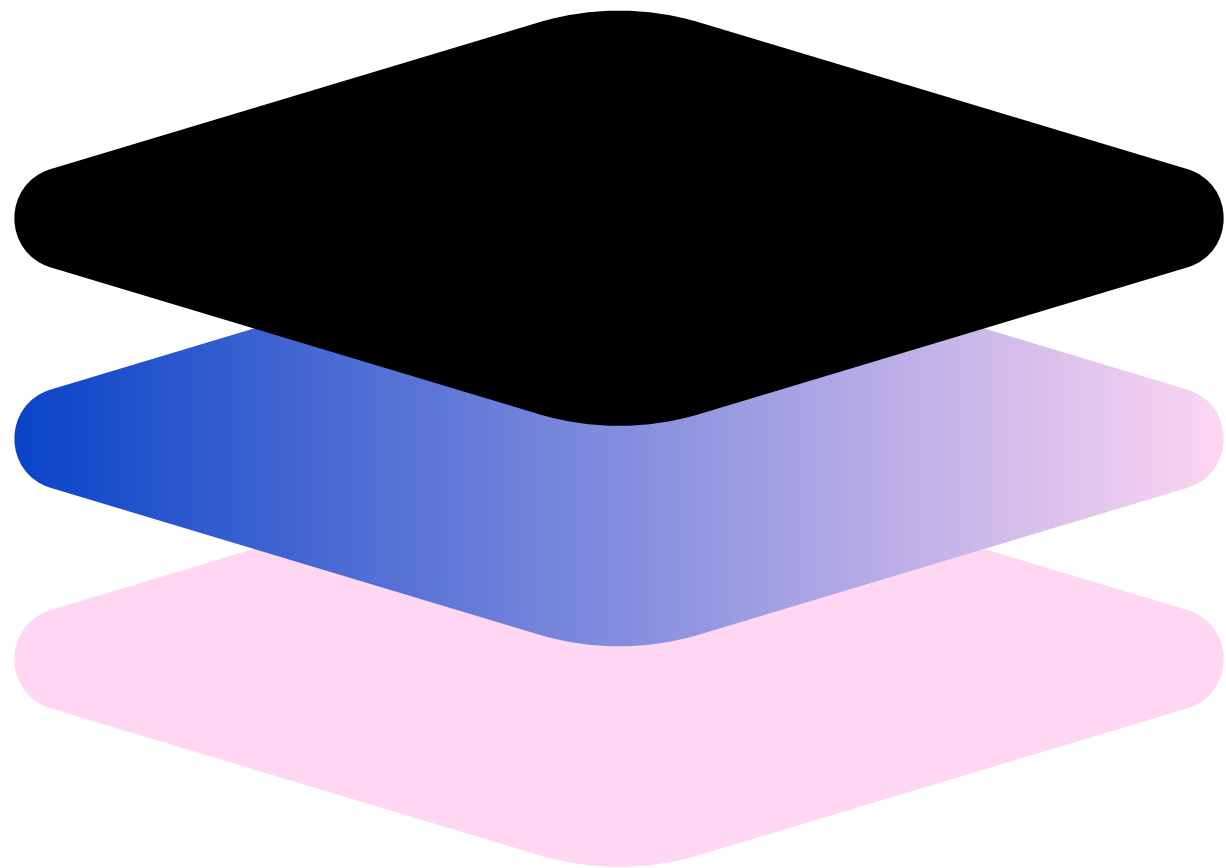
01 INTRODUCTION TO DRIVER DROWSINESS

02 UNDERSTANDING MAIN.IPYNB

03 EXPLORING MODEL_ARCHITECTURE.PY

Importance of Drowsiness Detection in Driving

Driver drowsiness detection is crucial for preventing accidents, enhancing road safety, and improving overall driving performance

**Statistics on Driver Fatigue and Accidents**

Driver fatigue contributes to approximately 20% of annual road accidents, highlighting the critical need for detection systems.

OVERVIEW OF DROWSINESS DETECTION

Objectives of the Project

The project aims to develop an effective drowsiness detection system to enhance road safety and reduce accidents caused by driver fatigue.
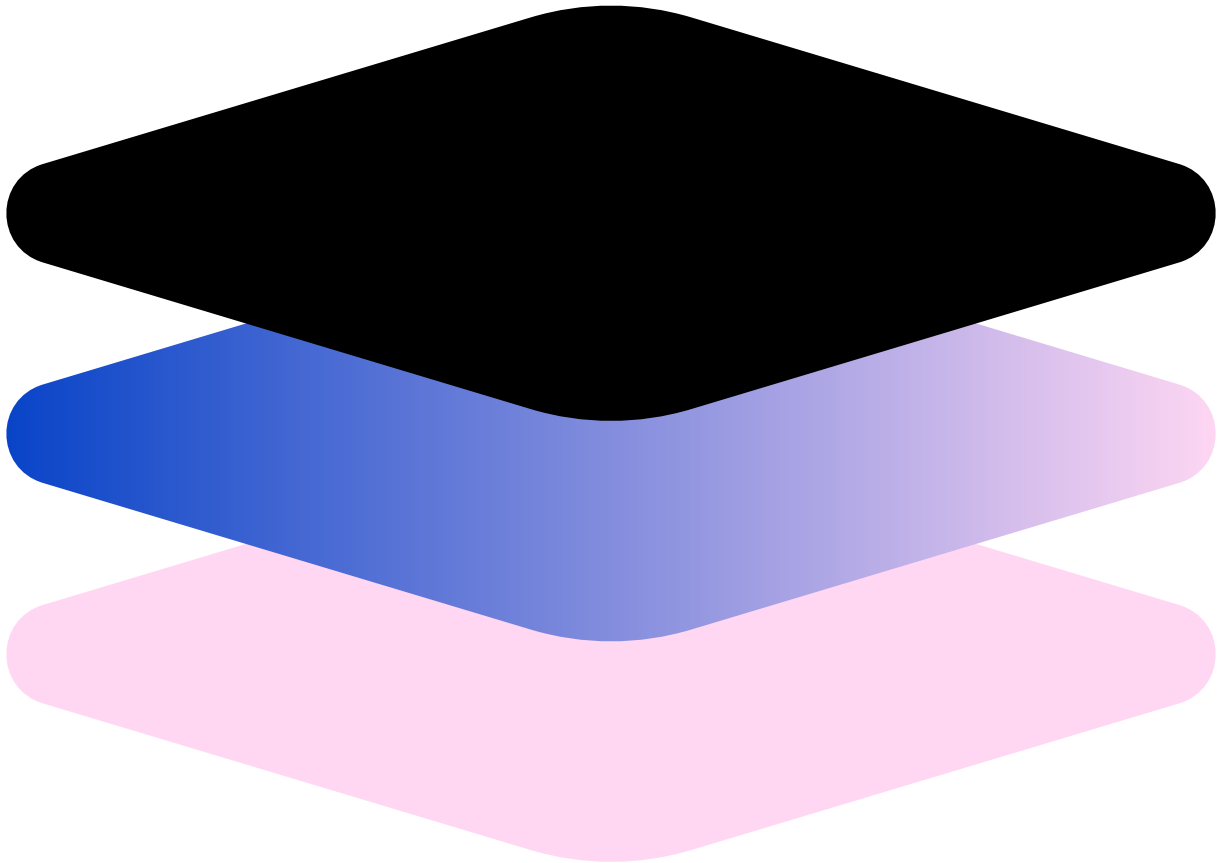
IOT CLASS

CONTENTS

Analytsis of the Jupyter Notebook

Step1

Structure of main.ipynb
The main.ipynb structure contains sections for data preprocessing, model training, evaluation, ensuring a systematic approach to driver drowsiness detection

Step2

Data Preprocessing Methods
Data preprocessing in main.ipynb includes normalization, handling missing values, and feature selection to enhance model accuracy and performance.
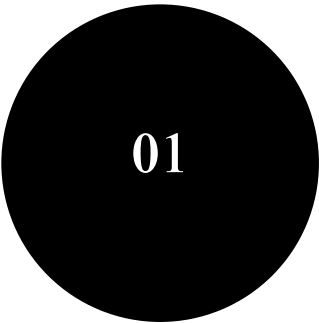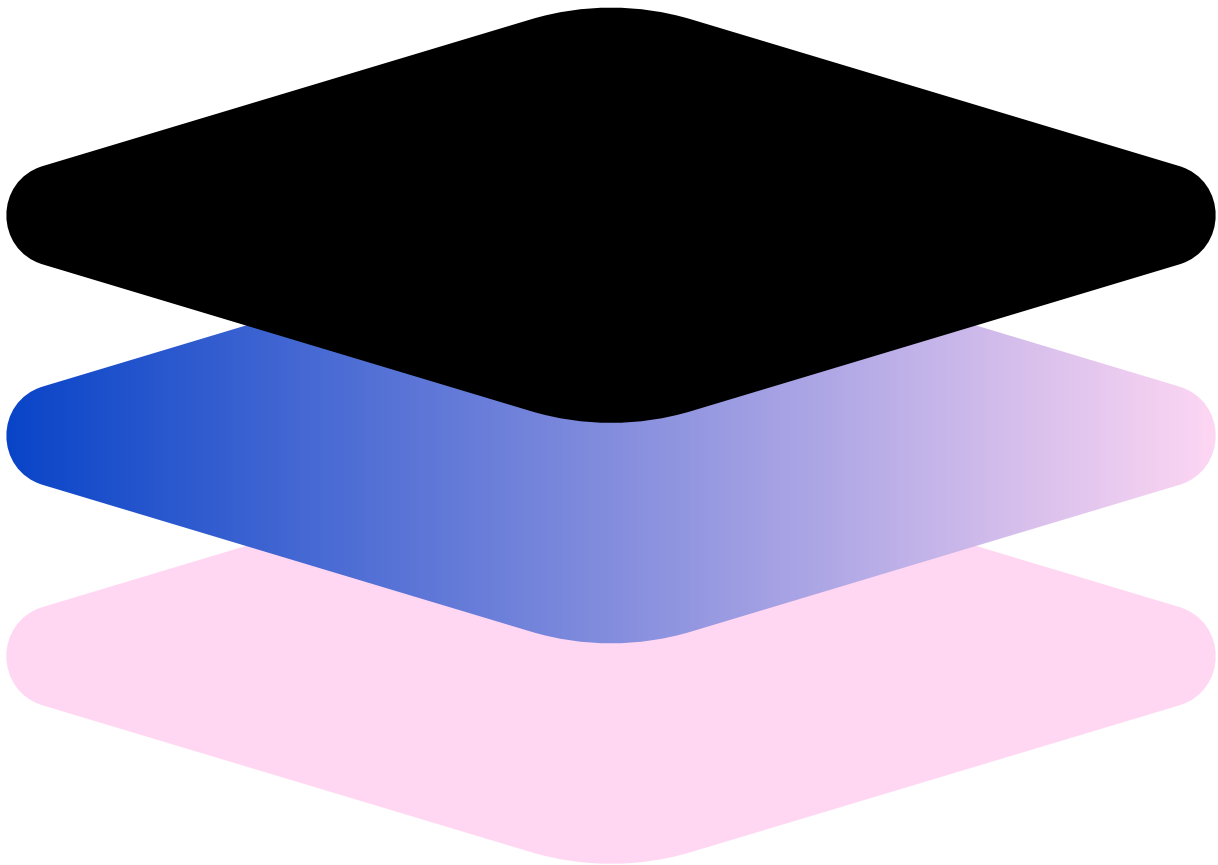
IOT CLASS

CONTENTS

01 INTRODUCTION TO DRIVER DROWSINESS

02 UNDERSTANDING MAIN.IPYNB

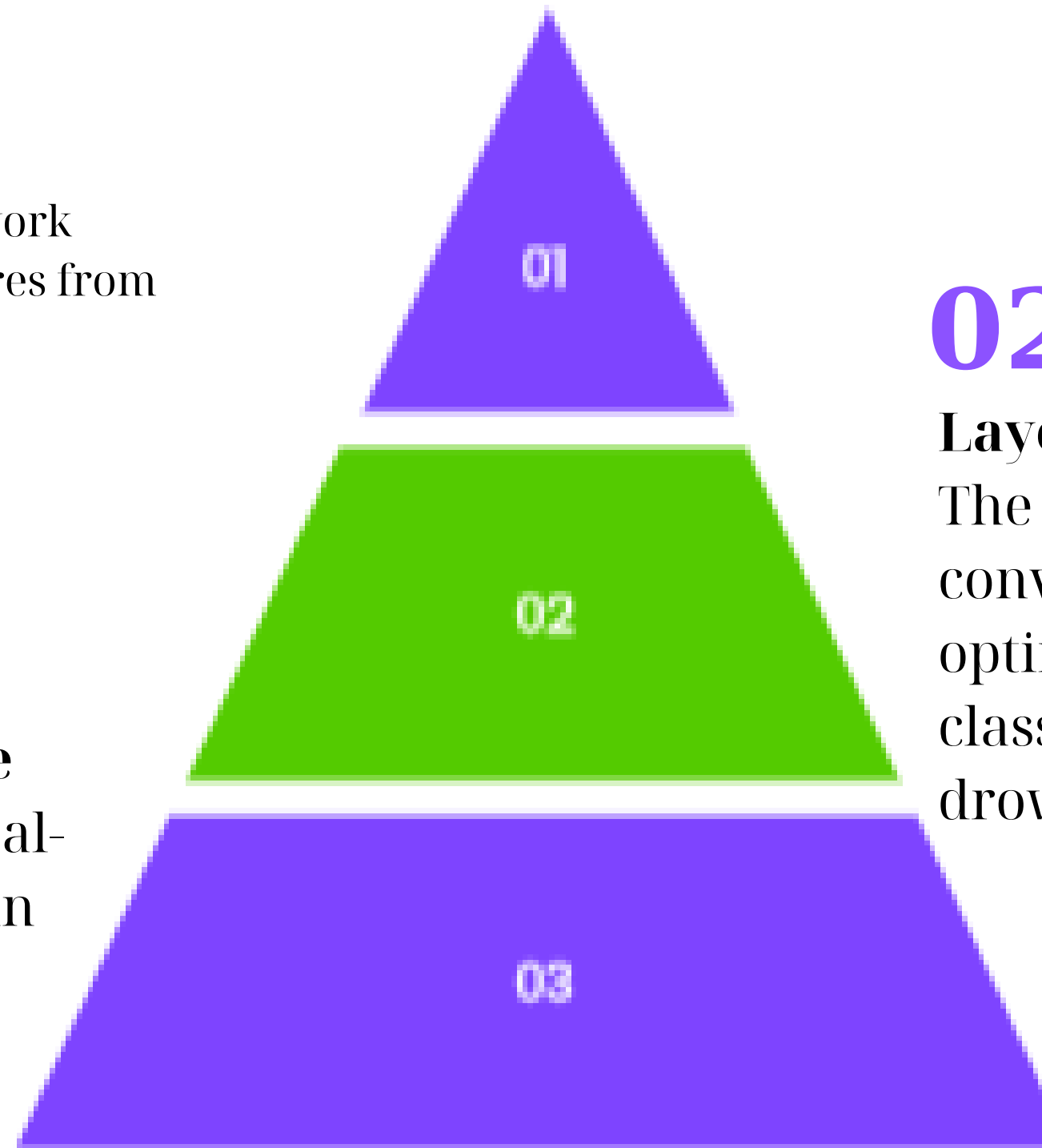**03** EXPLORING MODEL_ARCHITECTURE.PY

01

Overview of the Neural Network Architecture

The model employs a convolution neural network (CNN) architecture to effectively extract features from input images for drowsiness detection

02

Layers and Functions Explained

The model architecture consists of convolutional, pooling, and dense layers, optimizing feature extraction and classificaiton for detecting driver drowsiness.

03

Advantages of Chosen Architecture

The chosen architecture optimizes real-time processing, enhances accuracy in drowsiness detection, and supports scalability for future enhancements

01

02

03