

# MOOD RECOGNITION & RECOMMENDATION SYSTEM



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# Introduction



## Project Overview

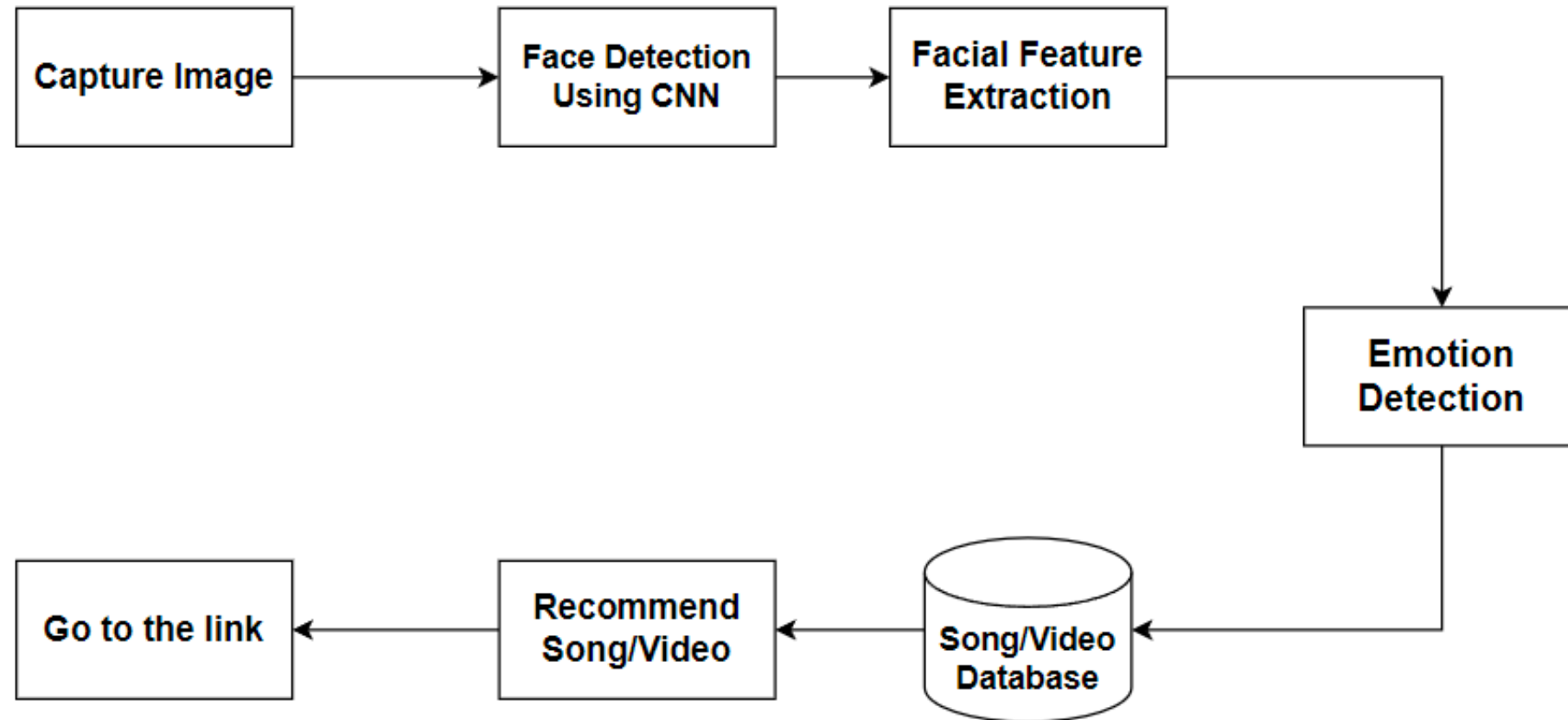
In the era of personalization, understanding a user's mood is crucial for providing tailored content that enhances the user experience. This project aims to bridge this gap by developing a machine learning model that can accurately recognize a person's mood based on their facial expressions and recommend videos or songs that align with their current emotional state.



## Description

The Mood Recognition and Recommendation System works by recognizing a user's mood through their facial expressions. It uses a trained machine learning model to classify the user's emotion from an image into one of several categories such as happiness, sadness, anger, surprise, etc. This mood classification is then used to recommend content - like songs or videos - that aligns with the user's current emotional state.

# Architecture & Algorithm used

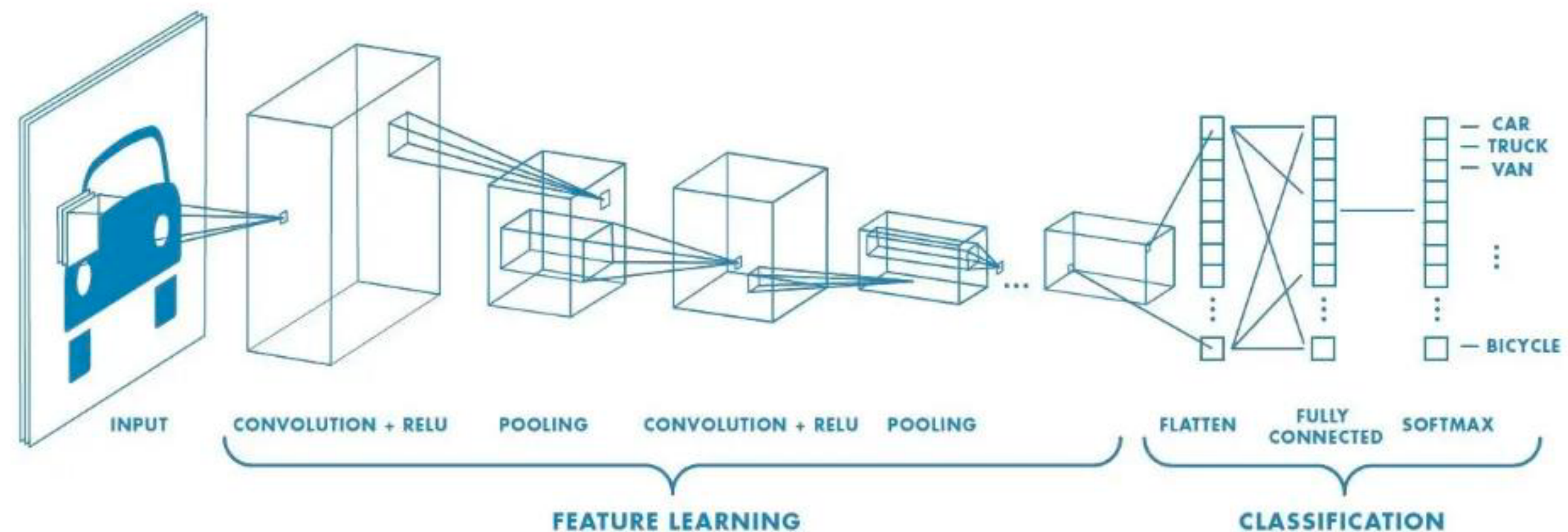


## Architecture

First, the image of user is captured, it is then put into CNN for facial detection, Facial features are extracted through the ML Model and hence emotions are detected. After the detection of the emotions, some songs/videos are recommended to the user from our database

## Algorithm

A Convolutional Neural Network (CNN) processes input through convolutional layers with rectified linear unit (ReLU) activation, followed by pooling layers to extract features. This process is repeated, and the output is then flattened and connected to a fully connected layer. The final layer uses softmax activation for classification.







# Methodology

## Data Preprocessing:

The images are rescaled and normalized. The data is loaded in batches using the `flow_from_directory` method.

## Model Building:

A Convolutional Neural Network (CNN) model is built using Keras. The model consists of Conv2D, MaxPooling2D, Dropout, Flatten, and Dense layers.

## Model Compilation & Training:

The model is compiled with the Adam optimizer and the categorical cross-entropy loss function. The model is trained using the `fit_generator` method, which allows for real-time data augmentation.



**THANK  
YOU**

