**Synopsis of Project**

based on

**“Predict Age and Gender”**

**Bachelor of Technology**

**Department Of Computer Science & Engineering**

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**AZAD INSTITUTE OF ENGINEERING & TECHNOLOGY, LUCKNOW**

(2019-2020)

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**STATEMENT OF THE PROBLEM**

Considering of an image representing a frame taken from video stream, automatic face recognition is a particularly complex task that involves detection and location of faces in a cluttered background followed by normalization and recognition. The human face is a very challenging pattern to detect and recognize, because while its anatomy is rigid enough so that all faces have the same structure, at the same time there are a lot of environmental and personal factors affecting facial appearance. The main problem of face recognition is large variability of the recorded images due to pose, illumination

conditions, facial expressions, use of cosmetics, different hairstyle, presence of glasses, beard, etc.

Images of the same individual taken at different times, may sometimes exhibit more variability due to the aforementioned factors (intrapersonal variability), than images of different individuals due to gender, race, age and individual variations (extra personal variability). One way of coping with intrapersonal variations is including in the training set images with such variations. And while this is a good practice for variations such as facial expressions, use of cosmetics and presence of glasses or beard, it may not be successful in case of illumination or pose variations.

**WHY IS PARTICULAR TOPIC CHOOSEN?**

**Face Detection** is the first and essential step for **face recognition**, and it is used to detect **faces** in the images. It is a part of object **detection** and can use in many areas such as security, bio-metrics, law enforcement, entertainment, personal safety, etc. This project can be useful in many fields and will proide a great information about the human body.

**OBJECTIVE OF THE PROJECT**

This project is a predictive app which predicts the gender and age of a person’s face. This project will provide a great help to doctors and can also be useful in security purposes.**Face detection** is an AI-based computer technology that can identify and locate the presence of human faces in digital photos and videos. The main objective is to increase the capabilities of AI-based technology systems and applications.

**SCOPE OF THE PROJECT**

The project has a vast scope in present scenario and future.

It can be used in Hospitals to detect the age of patient and then allot the doctor accordingly.

It can be used by various beauty camera application providers to predict the age and gender and accordingly provide the suggestions.

It has a great Scope in security systems both at home or professional level.

It can be used at Water parks, Railways, Traffic Rules and Authorisation system in various organisations.

**CONTRIBUTION**

The application will be a greate contribution to the developing technology and digital india. It will reduse the unnecessary work and increase the security feature by predicting the age and gender.