**CHAPTER 3**

**PROBLEM STATEMENT**

**Existing system**

Existing facial emotion recognition systems often leverage traditional computer vision methods or deep learning approaches. Traditional systems on handcrafted features and classifiers, while contemporary systems increasingly adopt deep learning models like Convolutional Neural Networks (CNNs) trained on large datasets. Commonly used datasets, such as CK+, contain labeled facial expressions for training classifiers. Existing systems find applications in real-time scenarios, spanning human-computer interaction, healthcare, security, and entertainment. The proposed FERC algorithm in the document aims to contribute to this field with its unique approach to facial emotion detection.

**Disadvantages:**

* Changes in lighting, background, or facial position can impact the performance.
* Using facial emotion recognition in public areas can raise privacy issues, and ethical considerations need to be addressed.
* Limited or biased training data can make the system less accurate for different people and situations.