Evaluating Bias in Facial Recognition Systems

Project Outline:

Introduction

- Objective: To assess the fairness and bias in facial recognition technologies used by law enforcement, with a specific focus on demographic discrepancies (age, gender, race).
- Background: Discuss the increasing use of facial recognition by law enforcement agencies and the societal concerns it raises, particularly regarding bias and discrimination.

Problem Statement

- Identify the ethical concerns regarding the accuracy and bias of facial recognition systems.
- Highlight the potential consequences of biased facial recognition on certain demographic groups.

Literature Review

- Review existing studies on facial recognition technology and its biases.
- Analyze past reforms or solutions attempted to address these biases.

Methodology

- Data Collection: Describe the types of data needed (e.g., publicly available facial recognition datasets) and the criteria for selecting this data.
- Analysis Techniques: Outline the statistical and machine learning methods you will use to evaluate bias in the datasets.
- Bias Metrics: Define how you will measure bias (e.g., error rates across different demographics).

Project Plan

- Week 1-2: Background research and data collection.
- Week 3-4: Data cleaning and preliminary analysis.
- Week 5: In-depth bias analysis using selected methods.
- Week 6: Development of potential solutions or mitigation strategies.
- Week 7: Finalizing the report and preparing the presentation.

Impact

- This project aims to promote ethical use of technology and influence policy decisions, ensuring that facial recognition technology is used responsibly and justly.