Project Scope for Facial Recognition Data Science Capstone Project:

1. Objective:

Our goal is to create a facial recognition system that not only boasts accuracy and efficiency, but also upholds ethical standards. It must excel at identifying or verifying individuals from both digital images and video frames.

2. Functional Requirements:

Data Collection and Processing:

Our first step is to collect/find the dataset that encompasses a wide range of ethnicities, ages, genders. For the preprocessing we will use data augmentation techniques.

Model Development and Training:

To evaluate different facial recognition algorithms, including traditional machine learning techniques and deep learning models to identify effective approach for our data.

Model Evaluation:

To ensure the model's accuracy, recall, precision, and fairness, we will test it against a separate validation dataset. We will also subject it to cross-validation and real-world scenarios to ensure its robustness and dependability.

3. Technical Requirements:

Programming languages and frameworks (Python, TensorFlow, PyTorch). Use of version control systems for code management (Git). Requires hardware support for training/running the model.

4. Deliverables:

A fully functioning facial recognition system with better accuracy and efficiency metrics. Detailed documentation, which includes a report on the model development process, training data, algorithm choices, ethical considerations. A presentation summarizing the project findings, challenges, and future directions.

6. Future Scope:

Exploration of additional applications and functionalities, such as emotion recognition, age estimation.