**Deep Fake Detection with Deep Learning Algorithms**

**Abstract:**

In response to the escalating threat of Deepfake technology, this paper presents an innovative approach for predicting Deepfakes through Convolutional Neural Networks (CNNs). We will train the CNN architecture on a diverse dataset comprising real and fake images from Kaggle, with a forward-looking strategy for refinement through transfer learning, leveraging pre-trained models to enhance the network's capacity for discerning patterns in real and fake image classes. Our methodology focuses on enabling the model to learn and distinguish between real and fake images, capturing subtle nuances unique to each category. Preliminary experimental results show promising performance in predicting fake images, and we commit to ongoing refinement and optimization to achieve superior results.

**Key Words**

Deepfake; Image Detection; Convolutional Neural Networks; Deep learning; Pre-trained models;

Tentative Work Plan for

Deep Fake Detection with Deep Learning Models

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| Work Plan | Time Period |
| Preparing Problem Statement | 1st - 10th Sept |
| Collecting the research paper in the problem domain & Data collection | 11th - 20st Sept |
| Writing a critical review & Literature survey | 21st - 30th Sept |
| Proposed methodology | 1st-6th Oct |
| Experimenting the algorithms and the tools & Implementation | 7th - 16th Oct |
| Validation | 17th – 22nd Oct |
| Documentation | 23th-3rd April |