Weekly Progress Report - 10

Name of the Student 1	Hetanshi Bhatt
Roll Number of Student 1	22BPC156
Name of the Student 2	Kunal Solanki
Roll Number of Student 2	22BCP131
Project Title	Combating Digital Misinformation: Deepfake Detection Using Deep Neural Networks
Name of the Supervisor (Mentor) at PDEU	Dr. Samir Patel
Week Number	Week 10

Progress made in Week:

1. Final Model Evaluation & Metrics

- **Test Set Evaluation:** Loaded the Optuna-optimized XceptionNet and performed the definitive evaluation on the unseen, held-out test set to confirm generalization performance.

- **Video-Level Metric:** Successfully implemented the final inference pipeline, where frame-level probabilities were **averaged** to yield the conclusive **Video-Level Classification Score** (the project's primary objective).

- **Comprehensive Results:** Calculated and recorded final metrics, including: **Final Video-Level Accuracy** ([Insert Final %]), **ROC-AUC** ([Insert AUC, e.g.,]), Precision, Recall, and F1-Score.

2. Building a Robust MLOps Pipeline (DataOps)

- **DVC Remote Migration:** Successfully transitioned the project's data and model cache from a development-stage Google Drive remote to an **industry-standard AWS S3 bucket**.

- **Benefit:** Established a foundation for **scalability, high availability, and better access control**, moving the project into the MLOps realm.

- **Pipeline Finalization:** The entire deepfake detection process—from data sampling to final training—was formalized into a fully **version-controlled and reproducible sequence** using **DVC** and **Git**.

Hetanshi Bhatt	Kunal Solanki	Samir Patel
Hetanshi	*tunal*	
Name and Signature of Student 1	**Name and Signature of Student 2**	**Name and Signature of Supervisor (Mentor)**

BTech Minor Project Policy