

TASK 1:

Data Science Applications Brainstorm:

1. Forestry and Wildlife Conservation

- Data science helps monitor forest health and wildlife populations by analysing satellite imagery, sensor data, and ecological patterns. Predictive models identify areas prone to deforestation or poaching, aiding in proactive conservation efforts.

2. Fashion Trend Forecasting

- Retailers leverage machine learning algorithms to analyse social media, sales data, and cultural trends, predicting upcoming fashion trends. This reduces overproduction and helps brands align their inventory with consumer preferences.

3. Agricultural Pest Management

- Data-driven models analyse weather patterns, soil health, and crop data to predict pest outbreaks. Farmers receive early warnings, allowing for targeted interventions that minimize crop damage and reduce pesticide use.

4. Archaeology and Cultural Heritage

- Machine learning techniques reconstruct ancient artifacts and predict the locations of undiscovered archaeological sites using geospatial data, historical texts, and excavation patterns, preserving cultural heritage efficiently.

5. Humanitarian Crisis Management

- Data science aids in disaster response by analysing social media, satellite imagery, and logistics data to allocate resources efficiently during crises, ensuring timely support to affected populations.

