

Task - 1

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Real world applications of data science.

1) Smart Traffic management:

How data science used:

- * Real time traffic monitoring:

use real-time traffic data, GPS tracking and historical patterns to optimize traffic signals and reduce congestion.

- * machine learning models predict peak traffic hours and suggest alternate routes for better flow.

2) Personalized mental health care.

AI-Powered Chatbots and apps analyze user inputs to detect early signs of anxiety or depression.

Natural Language Processing examines speech patterns and text inputs to assess mental well-being.

3) Smart farming and Precision Agriculture.

Sensors and drones collect data on soil health, moisture levels, and crop growth to optimize farming techniques.

4) Fake news detection.

NLP and sentiment analysis identify misleading or fabricated news articles.

Deep learning models cross-reference multiple sources to validate information authenticity.

5) Personalized learning in EdTech.

Adaptive learning platforms analyze student exercises and suggest relevant courses and study materials.