1.

Question 1

You are a new data scientist. You have been tasked with coming up with a solution for reducing traffic congestion and improving transportation efficiency. How would you go about it?

1 / 1 point

Gather and analyze streetcar operations data and identify congested routes

Suggest implementation of strict speed limits and traffic fines

Suggest implementation of surge charges for ride-sharing services.

Suggest creating more parking lots and garages in the city

ANAND: (A) Gather and analyze streetcar operations data and identify congested routes

Correct

Correct! By doing this you would be using data science to reduce traffic congestion and improve transportation efficiency in a city.

2.

Question 2

Imagine you take a taxi ride where the initial fare is a fixed amount, and the fare increases based on both the distance traveled and the time spent in traffic. Which concept in data analysis does this scenario closely resemble?

1 / 1 point

Regression analysis

Unstructured data extraction

Data visualization with R

Nearest neighbor algorithm

ANSWER: (A) Regression analysis

Correct

Correct! The scenario of a taxi ride with a fixed base fare and additional charges based on distance and time is analogous to regression analysis, where a constant and relationships between variables are determined.

3.

Question 3

You have to pick a file format which meets the following conditions: a) is self-descriptive for internet-based information sharing b) readable by both humans and machines c) Facilitates easy data sharing between different systems. Which file format would you pick?

1 / 1 point

Microsoft Excel Open XML Spreadsheet (XLSX)

Delimited text file formats (CSV/TSV)

JavaScript Object Notation (JSON)

Extensible Markup Language (XML)

ANSWER: (D) Extensible Markup Language (XML)

Correct

Correct! XML is a markup language with defined rules for encoding data, making it self-descriptive, readable by both humans and machines, and suitable for data sharing between diverse systems.