PUBLIC TRANSPORTATION EFFICIENCY ANALYSIS

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INTRODUCTION

The project involves analyzing public transportation data to assess service efficiency, on time performance, and passenger feedback.

Incorporating machine learning algorithms to predict “public transportation analysis” Here are some points to consider:

* **Regression**:
* **Time Series Analysis**:
* **Clustering**:
* **Natural Language Processing (NLP)**:
* **Anomaly Detection**
* **Natural Language Processing (NLP)**

Passenger Sentiment Analysis: Analyzing passenger feedback and sentiment can provide valuable insights into customer satisfaction and areas for improvement. Natural Language Processing (NLP) techniques can be used to classify and analyze feedback, identifying positive, negative, or neutral sentiments. This can help transportation companies understand their customers' needs, preferences, and pain points, allowing them to make data-driven decisions to enhance passenger experience.

* **Time Series Analysis**

Real-time Monitoring: Machine learning algorithms can be deployed to monitor real-time data streams, such as social media posts or customer reviews, to identify emerging issues or trends. By continuously analyzing this data, transportation companies can quickly respond to customer concerns, address potential disruptions, and take proactive measures to improve service quality.

* **Regression**

Predictive Maintenance: Apart from service disruptions, machine learning algorithms can also be used to predict maintenance needs. By analyzing data from sensors, maintenance logs, and historical records, algorithms can

identify patterns and predict when maintenance is required. This helps transportation companies optimize their maintenance schedules, reduce downtime, and ensure the reliability of their services.

* **Clustering**

Personalized Services: Machine learning algorithms can be used to analyze passenger preferences and behaviors, enabling transportation companies to offer personalized services. By understanding individual preferences, companies can tailor their offerings, provide targeted recommendations, and create a more personalized and enjoyable travel experience for passengers.

* **Anomaly Detection**

Enhanced Safety Measures: Machine learning algorithms can also be utilized to improve safety measures. For example, algorithms can be trained to analyze video feeds from surveillance cameras to detect potential hazards or unusual situations, enabling transportation companies to take preventive actions and ensure passenger safety.