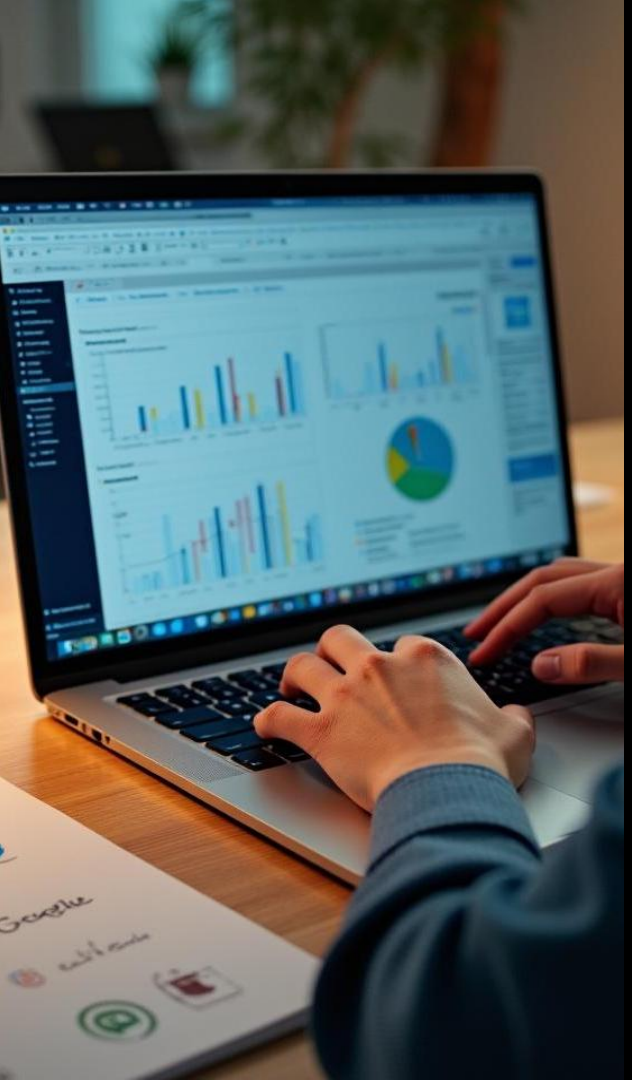
NLP Model

Analyzing Sentiments in Tweets



Introduction

This presentation outlines our project focused on building a **Natural Language Processing (NLP)** model. The goal is to classify tweets related to **Apple** and **Google** products into **Positive**, **Negative**, or **Neutral** sentiments, providing insights into public opinion and brand perception.

01

Project Overview

Project Goals

Our aim is to develop a scalable **NLP model** that can effectively analyze **social media** sentiment. This classification will help us understand customer perceptions and drive **data-informed decisions** for **technology companies**.

Importance of Sentiment Analysis

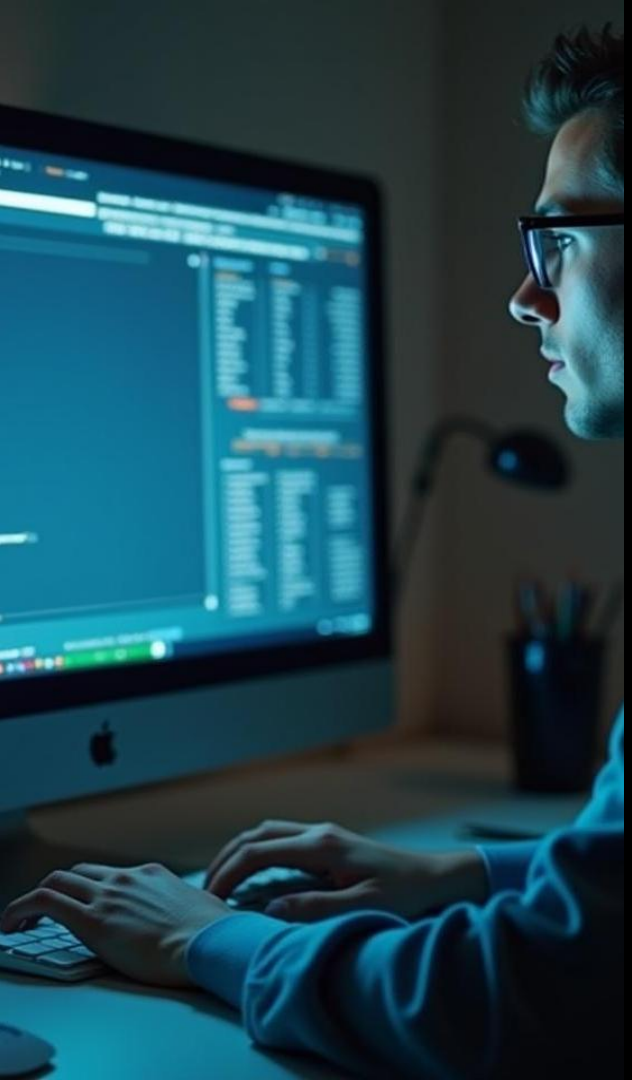
Sentiment analysis is crucial for understanding **public perception** and brand reputation. By leveraging machine learning, companies can gain valuable insights that support **strategic decision-making** and enhance market understanding, enabling them to **stay competitive**.

Target Companies: Apple and Google

Our analysis focuses on **Apple** and **Google**, two leading technology firms. By understanding sentiment towards their products, we aim to provide valuable insights into **customer preferences** and how these brands can optimize their **marketing strategies**.

02

Methodology



Data Collection Techniques

We utilize various data collection methods to gather **tweets** related to both companies. Techniques include API integration with **Twitter**, web scraping for broader sentiment, and ensuring a diverse dataset for comprehensive analysis.

Machine Learning Algorithms Used

Our model employs state-of-the-art **machine learning algorithms** such as **Support Vector Machines** and **LSTM** networks. These algorithms excel at **text classification** tasks, ensuring accurate sentiment detection in our analyses.

Model Evaluation Metrics

To gauge model performance, we focus on critical evaluation metrics like **accuracy**, **precision**, and **recall**. These metrics help us understand the effectiveness of our model in correctly classifying tweet sentiments, ensuring reliable insights for stakeholders.

Conclusions

The development of our **NLP model** represents a significant step towards understanding brand sentiment. By accurately classifying tweets, we will provide insights that drive informed decision-making and enhance the market strategy for **Apple** and **Google**.