**Abstract:**

This project presents a sentiment analysis system using Python, aimed at automating the process of extracting sentiments from social media data. The goal is to classify textual data into positive, negative, or neutral sentiments using machine learning algorithms. The workflow integrates web scraping for data collection, natural language processing (NLP) techniques for text preprocessing, and supervised learning methods such as Logistic Regression, Naive Bayes, and Support Vector Machines for sentiment classification. This project follows MLOps principles by implementing continuous integration and deployment (CI/CD) pipelines for efficient model development, training, and deployment. The system ensures model monitoring, scalability, and reproducibility, leveraging cloud-based infrastructure to streamline the end-to-end machine learning lifecycle**.**