

# WhatsApp Chat analysis for Government Organization using Machine Learning

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**Abstract:** *WhatsApp is widely used for internet-based communication and group messaging. WhatsApp chats offer valuable data for machine learning, with the quality and quantity of data being crucial for successful models, as it provides the right learning experience. This study aims to analyze WhatsApp group messages and identify active participants. The tool developed for this purpose utilizes Python modules like pandas, matplotlib, and seaborn for data analysis and visualization. The results are displayed in a web interface using the Streamlit framework. This tool is efficient, resource-friendly, and applicable to large datasets. It allows users to gain valuable insights from their WhatsApp chat data. Additionally, a WhatsApp Chat Analysis System tailored for government entities is introduced. It offers a holistic approach to analyzing conversations, providing insights into sentiment, topics, and trends. The system enhances transparency and responsiveness within government organizations.*

**Keywords:** WhatsApp Chat Data, Pandas, Seaborn, Matplotlib, Streamlit

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