NATURAL LANGUAGE PROCESSING FOR SENTIMENT ANALYSIS IN SOCIAL MEDIA

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With deep gratitude, this book is dedicated to the Almighty God, whose divine guidance, along with the unwavering support of my family and friends, has brought this creation to life.

Preface

This monograph, titled "Natural Language Processing for Sentiment Analysis in Social Media," delves into the fascinating domain of sentiment analysis and explores how advanced natural language processing (NLP) techniques can be harnessed to uncover valuable insights from social media data. Sentiment analysis, also known as opinion mining, is a rapidly evolving field within NLP that deals with the identification and interpretation of emotions, attitudes, and opinions within written texts. The explosive growth of social media platforms has provided researchers, businesses, and individuals with an unprecedented opportunity to tap into the collective sentiment of vast user communities.

The primary objective of this monograph is to provide a comprehensive journey through the various components of sentiment analysis in social media. It begins by laying the foundation of NLP principles, delving into the underlying techniques that enable computers to understand and interpret human language. Through a combination of theoretical explanations and practical examples, readers gain a clear understanding of the challenges and possibilities that arise when dealing with unstructured, informal text from social media sources.

We would like to express our sincere gratitude to all those who have contributed to this monograph's creation, directly or indirectly. May it foster a deeper appreciation for the power of natural language processing and inspire readers to harness this power responsibly and ethically to make the world of social media a more insightful, empathetic, and positive space.

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The monograph **"Natural Language Processing for Sentiment Analysis in Social Media"** makes a key contribution to social media research by highlighting that relying solely on sentiment analysis for customer insights might be less effective than human analysis of consumer conversations. This monograph emphasizes the potential superiority of Natural Language Processing (NLP) over traditional sentiment analysis, offering valuable insights for enhancing social media monitoring practices. By incorporating various aspects like different parts of speech, dimensionality reduction, proper model training, and noise-free data, the proposed model achieves improved sentiment analysis performance. Although acknowledging limitations, such as the need for varied datasets, the study underscores NLP's potential for enhancing sentiment analysis on social media.

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