**Boosting Buddy: A Conversational Agent for Improvement of Mental Health in Roman Urdu**

**Aqsa Ali**

Minhaj University

Department of Computer, Lahore

## Abstract

Sentiment analysis is extremely critical in our lives. People express their emotions in several different ways, including facial expressions, movements, speech, and text. Artificial intelligence (AI) text-based conversational agents offer higher circumstantial and on-time support rather than the human coach. Only 750 trained psychiatrists are working in Pakistan, which makes the situation worse. This study aims to figure out how to detect emotions adapted from Roman Urdu text documents. Previously, many researchers worked hard and put so much effort into it. Several Languages were passed through emotion detection tests, but there is just a small amount of Roman Urdu work.

As an outcome, it is a need to learn Roman Urdu, as it is a frequently spoken language for communication on social platforms. Since many natural language processing tasks use language resources, the most common issue for Roman Urdu is the non-availability of standard corpus for sentiment detection from text documents. The sentiment study of text uses multiple objectives, including optimizing product quality, dialogue programs, investment patterns, and mental well-being. To concentrate on the Roman Urdu sentence's emotional polarity, we built a corpus of 3634 sentences collected from various disciplines and annotated it with eight distant classes in this study. This dataset contains seven core emotions: sadness, fear, happiness, anger, shame, guilt, and neutral. The data was collected from the people with the help of Google Forms, wordpress form and with the help of different questions and answers with the specification of the text. For this purpose, the Isear dataset was being used.

Keywords; Roman Urdu; Depression; Cognitive Behavioural Theory (CBT); Emotion Detector.