EDITORIAL NOTE

Preface: Special issue on Natural Language Processing applications for low-resource languages

Partha Pakray[1] , Alexander Gelbukh[2] and Sivaji Bandyopadhyay[3]

[1]National Institute of Technology Silchar, Silchar, Assam, India, [2]Instituto Politécnico Nacional, Mexico City, Mexico, and [3]Jadavpur University, Kolkata, West Bengal, India
Corresponding author: Partha Pakray; Email: partha@cse.nits.ac.in

We are delighted to announce the publication of the Special Issue on *"Natural Language Processing Applications for Low-Resource Languages"* received an overwhelming response with a total of 49 submissions, showcasing the vibrant interest of the NLP community in this specialized domain. The rigorous review process, overseen by our distinguished guest editorial board consisting of renowned international experts, meticulously evaluated each submission through multiple rounds of peer review. Ultimately, 23 articles were selected for publication, reflecting the highest standards of academic and research excellence and relevance to the theme.

The articles featured in this special issue delve into various facets of computational models tailored for low-resource languages, spanning morphological analysis, sentiment analysis, hate speech detection, and language-specific tasks such as dependency parsing and machine translation. By encompassing languages such as Gujarati, Dravidian languages, Arabic, and others, this collection underscores the rich linguistic diversity addressed within our scholarly discourse. The articles in this special issue not only address the technical intricacies of NLP in low-resource languages but also shed light on the socio-cultural dimensions inherent in linguistic diversity. By exploring the nuances of sentiment, hate speech, and linguistic phenomena specific to each language community, these contributions offer insights that extend beyond computational linguistics, enriching our understanding of language usage and dynamics in diverse cultural contexts.

Low-resource languages present distinctive challenges in NLP, characterized by scarce annotated data and linguistic resources. The articles showcased in this special issue confront these challenges with innovative methodologies and the strategic integration of pre-trained models to advance NLP capabilities within under-resourced linguistic environments. From analyzing sentiment in code-mixed Dravidian languages to detecting hate speech across Hindi, Marathi, Bengali, Mizo, and Bodo, the research contributions showcased in this issue underscore the imperative of narrowing the gap in NLP proficiency across diverse language communities.

We extend our heartfelt appreciation to the esteemed members of the guest editorial board for their unwavering commitment and scholarly expertise in evaluating the submissions. Their invaluable contributions have been pivotal in ensuring the scholarly rigor and integrity of this

special issue. Additionally, we express our gratitude to the editorial team and Prof. Ruslan Mitkov, for their steadfast support and guidance throughout the editorial journey.

Partha Pakray, Alexander Gelbukh, and Sivaji Bandyopadhyay are Guest Editors of the Special Issue on Natural Language Processing Applications for Low-Resource Languages.