Preface: 7th Workshop on Natural Language Processing for Requirements Engineering (NLP4RE'24)

Sallam Abualhaija[1], Chetan Arora[2], Davide Dell'Anna[3], Alessio Ferrari[4] and Sepideh Ghanavati[5]

[1]University of Luxembourg, Luxembourg
[2]Monash University, Australia
[3]Utrecht University, The Netherlands
[4]CNR-ISTI, Italy
[5]University of Maine, USA

1. Preface

Natural language processing (NLP) plays an essential role in several areas of software engineering (SE), and requirements engineering (RE) is no exception. Requirements are generally authored and communicated in textual form and different levels of formality, from structured (e.g., user stories) to unstructured natural language. Furthermore, in the last few years, the advent of massive and heterogeneous sources, such as tweets and app reviews, has attracted even more interest from the RE community, and the recent developments in large language models (LLMs) and generative AI have opened new opportunities for RE. LLMs will likely be the enabling technology for solving long-standing RE problems, such as traceability, classification, and compliance.

The Natural Language Processing for Requirements Engineering Workshop (NLP4RE) was established in 2018 as a venue to foster communication between researchers and practitioners interested in the field. The 2024 edition was held in Winterthur, Switzerland, and saw the presentation of 4 full papers and two conference first submissions covering different aspects of NLP4RE, including requirements classification, formalization of requirements, goal modeling, automated requirements generation approach and the role of LLMs and Transformers in RE.

NLP4RE also included a keynote from Dr. Andreas Vogelsang, Professor at the University of Cologne, titled *Prompting the Future: Integrating Decoder-Only LLMs and Requirements Engineering*. The talk introduced a pioneering approach to integrating decoder-only LLMs into

*Sallam Abualhaija, Chetan Arora, Davide Dell'Anna, Alessio Ferrari, Sepideh Ghanavati

✉ sallam.abualhaija@uni.lu (S. Abualhaija); chetan.arora@monash.edu (C. Arora); d.dellanna@uu.nl (D. Dell'Anna); alessio.ferrari@isti.cnr.it (A. Ferrari); sepideh.ghanavati@maine.edu (S. Ghanavati)

RE, poised to redefine the landscape of requirements elicitation, specification, and validation. The presentation was structured into two primary segments. The first part delved into the application of decoder-only models in automating RE tasks. It explored how these models can assist in accurately capturing and specifying requirements, generating requirement documents, and automating the verification of requirements consistency and completeness. By examining case studies and current research, the section highlighted the transformative potential of decoder-only LLMs in enhancing efficiency, accuracy, and comprehensiveness in RE. The second segment of the talk positioned RE as a critical discipline for developing well-crafted prompts essential for interacting with decoder-only LLMs. It underscored the importance of precise, unambiguous, and comprehensive requirements in formulating prompts that elicit accurate and relevant responses from the models. This part also discussed the art and science of crafting effective prompts, drawing parallels between requirements specification techniques and prompt engineering strategies.

2. Program Committee

We warmly thank all the reviewers of our Program Committee (PC), who helped in the selection of the papers by providing timely and accurate reviews. The PC members of NLP4RE'24 are:

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