Call for Papers

Special Issue on Generating Human Readable Explanations in NLP

Recent years have seen significant advances in the quality of state-of-the-art models, but this has come at the expense of models becoming less interpretable. Building explainable systems is a critical problem in Natural Language Processing (NLP), since most machine learning models provide no explanations for the predictions. Explainability in Deep Learning is an emerging field in machine learning that addresses how Deep Learning Methods make decisions. It refers to DL methods and techniques that produce human-comprehensible solutions. The explainable solution will enable enhanced prediction accuracy with decision understanding and traceability of actions taken. Explainable DL aims to improve human understanding, determine the justifiability of decisions made by the machine, introduce trust and reduce bias.

Building explainable methods is a critical problem in the field of Natural Language Processing (NLP), since most of the existing machine learning models provide no explanations for the predictions. Most of the existing explainable methods focus on interpreting the outputs or the connections between inputs and outputs. However, fine grained information is always ignored, hence the existing methods are not able to generate the information that can be readable by human. A Transparent, Interpretable, and Explainable system is required that can generate the human understandable information is required to be better prepared to understand "challenges and mitigations of NLP vulnerabilities".

The aim of this Special Issue is to attract explainable methods to generate human readable explanations with the purpose to stimulate discussion on the design, use and evaluation of novel Explainable Deep Learning models as the critical knowledge-discovery drivers to recognize, interpret, process and simulate human emotion for various NLP tasks. We invite the researcher working on practical use-cases of Explainable Deep Learning for Natural Language Processing that discuss adding a layer of interpretability and trust to powerful algorithms such as neural networks, ensemble methods including random forests for delivering near real-time intelligence.

Scope:

The scope of the articles we seek includes innovative concepts, novel approaches and techniques on experimental or theoretical novel contributions related to understanding, visualizing, and interpreting the deep learning methods for Natural Language Processing. We solicit papers covering various topics of interest that include, but not limited to, the following.

- ✓ Explainable Deep Learning for Natural Language Processing
- ✓ Explainable Deep Learning for emotion analysis in Text
- ✓ Explainable Deep Learning for aspect-based sentiment analysis
- ✓ Explainable multimodal sentiment analysis
- ✓ Explainable methods for Sarcasm and irony detection in online reviews
- ✓ Opinion spam detection and intention mining
- ✓ Explainable methods for multilingual sentiment analysis

- ✓ Explainable methods for Fake Information detection
- ✓ Explaining sentiment predictions
- ✓ Trust and interpretability in NLP
- ✓ Emotion categorization models for polarity detection

Submission Procedure:

Papers should be formatted according to the IEEE Transactions on Computational Social Systems guidelines for authors and manuscripts (both 1-column and 2-column versions are required) should be submitted electronically through the online IEEE manuscript submission system.

Important Dates:

Paper Submission Deadline: December 26, 2021

First review completed: February 15, 2022.

Revision due: September March 1, 2022

Second Review completed: May 15, 2022.

Final Manuscript due: June 16, 2022

Publication: Mid 2022

GUEST EDITORS:

Imran Razzak, Deakin University, Australia (Corresponding Editor)
Email: imran.razzak@deakin.edu.au

Reda Bouadjenek, Deakin University, Australia.
Email: reda.bouadjenek@deakin.edu.au

Aamir Cheema, Monash University, Australia,
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Ibrahim A Hameed, NTNU, Norway
Email: ibib@ntnu.no

Guandong Xu, University of Technology, Sydney, Australia
Email: guandong.xu@uts.edu.au

Amin Beheshti, Macquarie University, Australia
Email: amin.beheshti@mq.edu.au