

## SMC eNewsletter's Student Corner Column (Dec 2024 Issue)

*Chun Sing Lai*

In this issue of the Student Corner Column, we interview Sahrish Ghafar, co-author of the paper "Citation Count Is Not Enough: Citation's Context-Based Scientific Impact Evaluation" published in the IEEE Transactions on Computational Social Systems (Vol. 11 No. 4, August 2024).

1. Please tell us a bit about your background and your research area.

*My name is Sahrish Ghafar, and I completed my MS in Computer Science and currently working as an Associate Lecturer in University of Central Punjab, Lahore, Pakistan. My study area was data mining, and I worked in citation analysis and natural language processing (NLP) for my MS thesis. In contrast to simple citation count, my research aims to assess the significance of scientific work by examining the context of citations. I developed the Context-Based Article Impact Factor (CBAIF), that considers the sentiment underlying each reference to enhance citation evaluation. Furthermore, the proposed method offers a more qualitative approach by determining conflicts of interest between citing and cited authors in addition to assessing whether citations are positive, negative, or neutral.*

2. How did you become interested in your field?

*With study of literature, I realized that existing citation analysis approaches ignore the qualitative elements like citation context in favor of quantitative data like citation counts. This inspired me to investigate the possibility of using natural language processing to assess the sentiment of citations. My motivation for pursuing this research topic stemmed from my desire to use data to generate meaningful understandings about the impact of research and the need for an improved system to evaluate the value of academic work.*

3. What motivated you to join the IEEE SMC Society?

*My interest in citation analysis led me to join the IEEE SMC Society because of its multidisciplinary approach, which integrates social and computer systems. My study employing machine learning and natural language processing for scholarly impact evaluation is in line with the society's focus on developing intelligent systems, including human-machine interaction. Being a member of an international community that encourages cooperation and creativity in a variety of fields motivated me to share my knowledge and interact with specialists in the computational and social sciences.*

4. What motivated you to publish in the IEEE Transactions on Computational Social Systems?

*Because IEEE Transactions on Computational Social Systems emphasizes integrating computational techniques with practical social issues, it is a good fit for my citation analysis work. I was able to present my study on enhancing citation-based ratings through sentiment analysis to this journal's wide interdisciplinary readership. By introducing the Context-Based Article Impact Factor (CBAIF), I want to provide a fresh viewpoint to the discipline and make it extremely pertinent to writers and readers who are interested in academic impact assessment.*

5. What is the main innovation in your paper titled "Citation Count Is Not Enough: Citation's Context-Based Scientific Impact Evaluation" and its importance to IEEE Transactions on Cybernetics?

*The Context-Based Article Impact Factor (CBAIF) is the main invention in "Citation Count Is Not*

*Enough: Citation's Context-Based Scientific Impact Evaluation." This approach analyzes the sentiments (positive, negative, or neutral) underlying each citation, going beyond the conventional citation count. In order to provide a more accurate and detailed rating of papers, it additionally takes into consideration potential conflicts of interest between referenced and citing authors. The accuracy of scientific impact estimates is enhanced by this qualitative review, particularly in cases when citation counts alone may be deceptive. This method provides writers of IEEE Transactions on Computational Social Systems with a useful tool for assessing the real impact of their work in the academic community by identifying more significant contributions based on context rather than citation count.*

6. Where would you see yourself in 5-years' time career wise?

*In the next five years, I see myself expanding my research into deeper applications of NLP in academic evaluation, aiming to develop more sophisticated tools for assessing scholarly impact. I hope to establish myself as a leading voice in improving citation analysis and contribute to shaping the standards for research evaluation. By collaborating with scholars from various disciplines, I aim to create systems that not only measure academic influence more accurately but also foster transparency and fairness in research metrics. Additionally, I intend to mentor emerging researchers in the field and actively contribute to advancing the state of the art in citation analysis, particularly through interdisciplinary projects combining computational and social sciences.*

### **Biography:**



Ms. Sahrish Ghafar received her Bachelor's degree in Computer Science from the Islamia University, Bahawalpur in 2015 and her Master's degree in Computer Science from the International Islamic University, Islamabad in 2019. Her research interests focus on data mining, particularly citation analysis and Natural Language Processing (NLP). She has published important research on context-based impact assessment of scholarly citations, exploring innovative techniques for assessing scholarly contributions. Over the years, she has actively participated in research and scholarship, contributing to the advancement of her field. She currently works as an Associate lecturer at the Central Punjab University, Lahore, where she is dedicated to teaching, mentoring students, and advancing research. Her commitment to research and teaching underscores her passion for academic excellence.