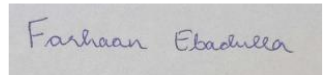


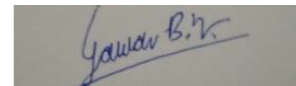
DECLARATION

We hereby declare that the Capstone Project Phase - 2 entitled “**Detecting Anomalous Self-Citations Using Relation Networks**” has been carried out by us under the guidance of **Dr. Nazmin Begum, Assistant Professor** and submitted in partial fulfilment of the course requirements for the award of degree of **Bachelor of Technology in Computer Science and Engineering** of **PES University, Bengaluru** during the academic semester June – Nov. 2023. The matter embodied in this report has not been submitted to any other university or institution for the award of any degree.

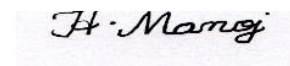
PES2UG21CS170 **Farhaan Ebadulla**



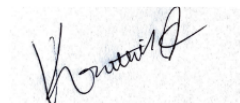
PES2UG21CS175 **Gaurav BV**



PES2UG21CS182 **H Manoj**



PES2UG21CS243 **K Kruthik**



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ABSTRACT

Accurate assessment of research impact is of utmost importance because of its gravity in assessing scholarly contributions, which determines the fundings and promotions. While impartial assessments are of utmost need, anomalous self-citation--the practice of inflating one's own research with unmerited citation-may affect the dilution of the importance to be rendered to other research workers' work.

Using citation network analysis, machine learning techniques, and domain-specific knowledge, the study depicts a novel approach to identifying anomalous self-citation patterns.

To this end, it builds a comprehensive citation network through a large academic publication corpus, extracting features always at the author and paper level. This is to develop a predictive model to identify those authors who exercise statistically improbable self-citation levels and distinguish between regular oscillations and persistent self-citation patterns.

The study, thus, evaluates the suitability for various disciplines of approaches for the identification of unusual self-citations, contributing to discussions about the science of evaluation and research ethics and providing a robust approach that will, in the end, work towards cancelling out the skewing effect of excessive self-citation in the assessment of research impact.

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