Peer Review Activity

Paper 1:

Title: A quantitative analysis of current security concerns and solutions for cloud computing (Gonzalez et al., 2012)

Research Question: The main problem addressed in this article is the identification, classification, organisation, and quantification of the main security concerns and solutions associated with cloud computing. It aims to help pinpoint the concerns that remain unanswered in the context of cloud security. This article is primarily focused on answering the question of what the main security concerns and solutions are in the field of cloud computing. Additionally, it seeks to propose a taxonomy for organising these concerns and solutions to provide a better understanding of the complex security landscape in cloud computing.

This article provides collective information to better understand the security concern in cloud computing.

Research Methodology: The research methodology described in this article involves the creation of a hierarchical taxonomy to analyse and categorise security concerns in the context of cloud computing solutions. This methodology is used to develop a structured model for studying security aspects in the cloud and aiding decision-making..

Data collection and Analysis: This article employs a data collection and analysis methodology to identify and categorise security concerns and solutions in the context of cloud computing.

Data Collection: In this article, the researchers collected data from a wide range of sources, including academia, organisations, and companies. These sources included

conference papers and journals from various academic publishers, reports, white papers, and interviews from organisations, and various materials from companies, Each reference was analysed to identify security concerns and the solutions provided. This involved categorising the concerns and solutions into specific categories, with one reference potentially contributing to multiple categories.

Data Analysis: The analysis revealed that the most frequently cited security concerns in the collected references were legal issues, compliance, and loss of control over data. These concerns were followed by technical issues such as isolation, with a smaller percentage of citations.

The concerns and solutions were categorised into specific groups, which were represented by pie charts. Radar charts were used to compare citations related to problems and solutions to show the disparity for each security used. This representation was suitable for this type of data representation (Hossain & Hossain, 2021)

Author support for conclusion: The author had used several citations to discuss about the nature of cloud security issues, challenges of cloud provider migration, requirement for ongoing research, importance of secure virtualisation, requirement to harmonise security solutions (Claybrook, 2011; CSA, 2011).

Enhancement required: Several of the pie charts, particularly in Figure 7, which illustrate data related to grouped security categories, appear crowded and complex. Using a bar chart would provide a more suitable alternative for presenting this information (Kosara, 2019).

Paper 2:

Title: Multi-Magnification Attention Convolutional Neural Networks (Chao et al., 2023)

Research Question: The research problem in this article is related to the limitations of Convolutional Neural Networks (CNNs) when dealing with large-scale and high-resolution images. Specifically, the problem is that standard CNNs typically focus on local features of small image patches and do not adequately consider the global features of the entire high-resolution image. This limitation hinders their performance in applications involving large and detailed images.

The research question addressed is: How can the performance of CNNs be improved for image analysis tasks involving large-scale and high-resolution images by adopting a multi-magnification approach (MMA) that allows the model to access both local and global features, and by using attention mechanisms to adaptively determine the importance of features at each magnification level?

Research Methodology: The primary research method employed in this study is the design, implementation, and evaluation of a neural network architecture, the MMA-CNN, to solve the research problem related to the analysis of high-resolution pathology whole slide images.

Data Collection: The data collection method involved capturing high-resolution medical images of liver tissues at various magnifications using a digital scanner including 40x, 10x, and 2.5x.

Data Analysis: Data analysis in this study involved training and testing the MMA-CNN on the provided datasets, measuring the model's performance through quantitiative metrics like sensitivity and Intersection over Union (IoU) values, and

comparing these results to other methods in tabular data presentation to evaluate the efficacy of the proposed approach.

Author support for conclusion: The article concluded that the MMA-CNN, which uses multi-magnification and attention mechanisms, improved classification and segmentation results for pathology whole slide images compared to methods using global or local features alone.

Enhancement required: This study could be enhanced by conducting statistical tests to determine the statistical significance of the improvements achieved by the MMA-CNN method over the compared methods. This can provide a more robust assessment of the results (Harrison et al., 2020)

References

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