**Response to Reviewer’s Comments**

**Title: Dissecting bitcoin blockchain: Empirical Analysis of Bitcoin network (2009-2020)**

**Manuscript reference number: JNCA-D-20-00569R1**

The authors would like to take this opportunity to thank the Editor-in-Chief and reviewers for the effort and expertise that they contribute to reviewing, without which it would be impossible to maintain the high standards of research. We have attached the necessary corrections in the revised work. Additionally, we have highlighted all the changes in **RED** in the response.

**Comments to the Author**

Reviewer: Most of my comments are addressed by this submissions, thanks.  
  
My remaining concern for this paper is still the novelty. The newly added section (section 4.6) to address the novelty issue only summarizes the network with some points. In my opinion, this section should be the second main part in the paper (after analysis). As the authors also claimed that "Related papers I Alqassem et al. [12] and X Lee et al.[13] also have suggested in the future works that an updated study of Bitcoin and other blockchain based networks should be made."

These "updates" should be discussed in more details.

X Lee et al. focused on Ethereum blockchain, and I Alqassem et al. focused on the time period of 2009-2014 to analyze Bitcoin systems. Ethereum is not just a crypto-currency but also a platform that enables distributed applications. Analysis cannot be compared between Ethereum andBbitcoin. Bitcoin has higher volumes, users and market cap so affects more users and should therefore receive more attention in our opinion.

What is the difference between current bitcoin network and the previous bitcoin network? It should discussed in multiple aspects.

As per the reviewers observations, a time series analysis was performed using previous data obtained of the Bitcoin network. The data for training the machine learning models was from years 2009-2020 and the predictions were made for the year 2021. A new section 4.6 was created to explain the methodology and the results.

According to the current network and the previous network, what will the future network look like?

I Alqassem et al. worked on Bitcoin 2009-2014 so we extended their work to 2020. I Alqassem et al. had commented on future outlook. Similarly in our paper instead of observations and conclusions we used machine learning and performed time series analysis. We allowed data to “speak for itself” and made observations on the basis of it for predicting growth outlook for year 2021.