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Reply on RC4

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Author comment on "A Scenario-based Case Study: AI to analyse casualties from landslides in Chittagong Metropolitan Area, Bangladesh" by Fahim Sufi et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2022-90-AC11, 2022

Many thanks for all the constructive feedback. All these suggestions are appropriate and we will be more than happy to address each and all of them in the updated manuscript. In response to "*clarify the implications of using techniques other than AI, or why your AI technique enhances/complements other types of analyses presented in the literature.*", we can highlight that this paper only focused on automatically identifying the relationships that may exist between an outcome variable (i.e., landslide related casualty) with a range of other variables (e.g., rainfall, area of mass, Elevation, etc.). Hence, we used a particular AI-based regression tool called "Key Influencer Visualization". There are many other AI-based as well as non-AI-based statistical techniques that may suit other research objectives. For example, to find the similarity and dissimilarities between past landslides, AI-based automated clustering techniques could be used.

In terms of "*Highlight the implications of using incomplete datasets when generating AI insights like those used in your research.*", we should highlight the fact that AI-based automated insight generation processes as depicted in this research are often referred to as data-driven insight. For data-driven insights, having a robust and complete set of data is often a mandate. In case the data suffers from irregular/missing values (or any other data quality issues hampering the overall quality of the dataset) then several pre-processing techniques (e.g., StandardScaler, MinMaxScaler, StandardScaler, OneHotEncoder, etc.) could enhance the performance of data-driven-insight solutions. The above explanation is also applicable to the honorable reviewer's point on "*Please clarify if this type of analyses can be conducted with any available data (as you suggested in your author response), or if minimum requirements (data collection size, completeness, etc.) exist to generate meaningful AI insights.*". Within the updated manuscript we would like to highlight the fact that having a more robust and comprehensive set of data assures the generation of more meaning of insights with the approach described within this paper.