 **References in Abstract**:  
**comment:** It is uncommon that some references have been cited in the Abstract, please move them to the main text.  
**reply:** We have relocated all references cited in the Abstract to the main text as requested.

 **Introduction Section**:  
**comment:** In the Introduction Section, the authors should clearly and specifically state the research question and identify the objectives, hypotheses, and expected outcomes of the study.  
**reply:** We have revised the Introduction Section to clearly articulate the research question, objectives, hypotheses, and expected outcomes of the study. (lines 71-79)

 **Model Justification**:  
**comment:** What is the reason for the selected model (such as Deep Neural Network combined with Genetic Algorithms)? Is there a good reason to support this choice?  
**reply:** We have included a detailed justification for choosing the Deep Neural Network combined with Genetic Algorithms in the revised manuscript, explaining why this model is well-suited for our study. (lines 131-148)

 **Remote Sensing Data Details**:  
**comment:** This manuscript did not describe in detail the specific sources, coverage, time span, spatial resolution and other key information of the remote sensing data used, which is essential for evaluating the model.  
**reply:** Thank you for your comment. The dataset used for this study is publicly available, and detailed information regarding the sources, coverage, time span, spatial resolution, and other key attributes of the remote sensing data can be found in the dataset documentation provided by the repositor.

 **Data Preprocessing**:  
**comment:** The manuscript lacks a detailed description of the data preprocessing steps, such as data cleaning, normalization, missing value processing.  
**reply:** We have added a detailed description of the data preprocessing steps, including data cleaning, normalization, and handling of missing values. (lines 154-160)

 **Implementation Details**:  
**comment:** The specific implementation details of the deep neural network (DNN) and genetic algorithm (GA) used in the study, such as network structure, parameter settings, data set selection and preprocessing, were not described in detail.  
**reply:** We have included a detailed account of the implementation details of the DNN and GA, covering network structure, parameter settings, dataset selection, and preprocessing steps.(lines 165-216)

 **Model Validation Methods**:  
**comment:** The manuscript did not clearly state the model validation methods, such as whether cross-validation, independent test set validation, were used, and what are the results of these validations.  
**reply:** The revised manuscript now clearly states the model validation methods used, including cross-validation and independent test set validation, and provides the results of these validations. (lines 248-256)

 **Explanation of Deep Learning Models**:  
**comment:** Although deep learning models are highly accurate, it is often difficult to explain their inner workings. Does this affect the interpretation and application of the results?  
**reply:** We have addressed the challenges associated with explaining deep learning models and discussed how this impacts the interpretation and application of our results in the revised manuscript. (section 4.3)

 **Discussion of Results**:  
**comment:** The discussion section briefly explains the results, without analysis of the reasons behind the model's performance, and without mentioning possible limitations, such as how the model performs in a specific region or under specific conditions, or whether there is an overfitting problem.  
**reply:** We have expanded the Discussion Section to include a thorough analysis of the model's performance, potential limitations, regional performance, and overfitting issues. (section 4.4)

 **Future Studies and Relevant Factors**:  
**comment:** In future studies, more relevant influencing factors behind urban floods need to be taken into account, such as the urban vertical patterns. Please refer to below.  
**reply:** We have reviewed the suggested references and incorporated considerations for urban vertical patterns and other relevant influencing factors in the future research directions section. (section 4.5)

 **Suggestions and Policy Implications**:  
**comment:** Based on the results obtained, the authors need to put forward suggestions and policy implications for urban flood prevention and control.  
**reply:** The revised manuscript includes practical suggestions and policy implications for urban flood prevention and control based on the study’s results. (section 4.1)

 **In-depth Analysis of Results**:  
**comment:** The discussion section should analyze the experimental results in depth, explore the advantages and disadvantages of the model, as well as possible application scenarios and future research directions. The author should discuss the potential and limitations of the model in practical applications based on the experimental results.  
**reply:** We have enhanced the Discussion Section with an in-depth analysis of the experimental results, exploring the model's advantages and disadvantages, possible application scenarios, and future research directions. (see Discussion)