CONCLUSION AND FUTURE WORK

The analytical process started with data cleaning and processing, finding missing value, exploratory analysis, and finally, model building and evaluation. This is not straightforward owing to the variety of flood forecasting and warning systems. This research concludes that the statistical uncertainty quantification methods can answer the question: what is the probability of the forecasts being accurate based on past performance? This method should be applied when the users require an estimation of the uncertainty of a flood forecast as probabilistic bands based on the historical rainfall data. We predict the flood using machine learning algorithms, which gave different results. From the above observations and analysis, the best algorithm for flood prediction is the Support Vector Algorithm (87%).

For future work, we plan to consider more explanatory variables such as the humidity of the air, tides, precipitation rate, river basin levels etc. to have more variables in the prediction. Conducting a survey on spatial flood prediction using machine learning models is highly encouraged. Nevertheless, the recent advancements in machine learning models for spatial flood analysis revolutionized this particular realm of flood forecasting, which requires separate investigation.