

INFORMATICS INSTITUTE OF TECHNOLOGY

In Collaboration with

UNIVERSITY OF WESTMINSTER (UOW)

BEng/BEng. (Hons) in Software Engineering

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Sri Lanka Dam Spill Over Predictor

Using

Rainfall Data

By

Chanaka Rathnakumara

Supervised By

Mr.Chathushka Dilhan

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Abstract

Sudden dam spill overs may affect human life including inhabitants and agricultural lands. Unexpected water level increment of a reservoir causes sudden dam spill overs. The main reason for this kind of unexpected water level increment is the high-water inflows to the reservoir due to rainfall. This study is to predict future dam spill overs of a dam using rainfall data. Dam management authority collects daily dam data like inflows, outflows, water level and the rainfall. By analysing past dam data, rainfall to the catchment area of the dam has a huge impact on water level of the dam. The proposed solution is a web-based prediction system that can predict future dam spill overs. Proposed solution predicts the predictions using daily rainfall data to the catchment area of the dam by analysing the past dam water level data and the past rainfall data. This solution would be able to predict future dam spill overs as well as the future water level of the dam using rainfall data that covers the core aspects of this project. With this solution, dam management would be able to identify the future dam spill overs and the future water levels of the dam and would be able take necessary future steps for dam spill overs.

Keywords: Data mining, Machine Learning, Dam Spill overs, Rainfall, Web application development, Dam management, Water level management of a dam