A Study on Detection and Monitoring of Water Quality and Flow

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Abstract:
The prevailing situations of water crisis i.e. nonavailability of drinking water, unpredicted floods, rapidly changing paths of water streams, are of great concern. The death rate is increasing day by day, because of the low quality of drinking water in most regions of the world. Similarly, the situations of flooding also cause huge losses from time to time. Many attempts are being made by researchers for the detection and monitoring of water quality and flow to overcome the

uncertainties associated with the quality of drinking water available to the general public and early warning of floods by adopting computing techniques. This paper aims to give the overview of data sources and techniques being used by existing literature and attempts to classify and highlight the ways of data gathering for water quality and flow. The real-time and reliable data for detection of water quality and flow for making predictions is difficult to collect. Many limitations have been attached to the predictions made i.e. location dependency. This study guides the researcher and provides insights to the researchers about the possible ways and sources of data that can be utilized by keeping tradeoffs in consideration.

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I. Introduction

Presently, the global warming and frequent climate change result into melting of melting of glaciers and abnormal rains affecting coastal areas. The continuously decreasing quality of drinking water is great concern throughout the globe. Due to the continuous mixing of unprocessed industrial and domestic wastes, the contaminations rate of water is rapidly increasing. The contaminations are of physical, organic, and chemical nature. Most of the diseases are spreading due to organic wastes which contaminate drinking water [1]. Water contamination happens when microorganisms and harmful chemicals from local waste and businesses either interact with water bodies, drain into groundwater or freshwater assets [2]. Due to the poor performance of facilities for water treatment,