

# Water Quality Prediction and Analysis Using Machine Learning

Mrs. D. Leela Dharani<sup>1</sup>, S. Jahnvi<sup>2</sup>, Y. Yougander<sup>3</sup>, M. Tanuja<sup>4</sup>, M. Yaswanth<sup>5</sup>

Assistant Professor, Department of Information Technology<sup>1</sup>

B. Tech Students, Department of Information Technology<sup>2,3,4,5</sup>

Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada, Andhra Pradesh, India

**Abstract:** *Water pollution is a critical issue in India with a negative impact on water resources sustainability which can cause an inadequate water supply to all people even though a large number of water resources are available. Every year a large number of people are being affected with various diseases due to drinking polluted water. This project uses the python libraries to analyse and predict the water quality using Machine Learning based upon the dataset fed to the model. This project helps us to know whether the water is potable or not. The dataset consists of various parameters which impact the purity of the water like ph., conductivity, hardness, solids, turbidity, chloramines, sulphates, trihalomethanes, organic carbons.*

**Keywords:** Water Quality, Random Forest, Classification, Decision Tree, pandas, SK Learn, NumPy..

## REFERENCES

- [1]. [https://www.researchgate.net/publication/352907194\\_An\\_Introduction\\_to\\_Water\\_Quality\\_Analysis](https://www.researchgate.net/publication/352907194_An_Introduction_to_Water_Quality_Analysis)
- [2]. <https://environmentalsystemsresearch.springeropen.com/articles/10.1186/s40068-016-0053-6>
- [3]. <https://www.javatpoint.com/machine-learning-decision-tree-classification-algorithm>
- [4]. <https://www.javatpoint.com/machine-learning-random-forest-algorithm>
- [5]. Dataset Kaggle kernels output imakash3011/water-quality-prediction-7-model -p /path/to/dest
- [6]. <https://journals.sagepub.com/doi/full/10.1177/11786221221075005>
- [7]. <https://www.anaconda.com/products/distribution>