

MACHINE LEARNING APPROACH FOR RAINFALL PREDICTION SYSTEM

*A project report submitted in partial fulfillment of the requirements for
the award of the Degree of*

**BACHELOR OF TECHNOLOGY
In
COMPUTER SCIENCE AND ENGINEERING**

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AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY
(Approved by AICTE, New Delhi & Permanently affiliated to JNTU Kakinada)
(Accredited by NAAC, UGC & NBA, AICTE)
MAKAVARAPALEM, NARSIPATNAM, VISAKHAPATNAM DIST(2018-2022)

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CERTIFICATE

This is to certify that the project entitled "MACHINE LEARNING APPROACH FOR RAINFALL PREDICTION SYSTEM" in partial fulfillment for the of degree of Bachelor of Technology in COMPUTER SCIENCE AND ENGINEERING, at AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, MAKAVARAPALEM, VISAKHAPATNAM is an bonafied work carried out by K RUCHIHA(18811A0530),Y.PADMAJA SURYAKALA (18811A0567),K SAI PRIYA(18811A0528),B LOKESH(18811A0504),G PRASANTH KUMAR (18811A0514) under the guidance and supervision during 2021-2022. Project Guide
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ABSTRACT

There are certain catastrophic events which could have drastic complications which may lead to the destruction of the infrastructure; Rainfall is one such event that could be severe both in its overabundance and its acute shortage. Hence accurate rainfall prediction is a core requirement in terms of economic as well as in administrative efforts. This importance has made us to focus on adding accuracy to rainfall prediction using the machine learning techniques with traditional unsupervised learning technique. We have considered a rainfall dataset from meteorological department in order to implement our prediction model. This process is carried out using two important machine learning techniques which initially involves clustering (K-Medoids) to be performed and later the clustered data is given as input to the Classifier algorithm (Naïve-Bayes Classifier) in order to make appropriate prediction. We had implemented this model of rainfall prediction to make accurate and efficient prediction because using any one kind of algorithm does not produce accurate results. Our main idea of using clustering coupled with simple predictors is to prove that this beats more complex methods such as Support Vector Machines and Random Forests in terms of accuracy, speed and execution time. In order to support our intuition we have implemented Naïve Bayes Classifier algorithm alone with no optimization applied which practically yielded predictions that is less accurate.