|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.NO | TITLE | PROPOSED WORK | TOOLS USED /  ALGORITHM | TECHNOLOGY | ADVANTAGE /  DISADVANTAGE |
|  |  |  |  |  |  |
| 1 | Efficient of water quality analysis and prediction using machine learning | Water makes up about 70% of earth surface.  Water quality as been expensive and time consuming lab and statistical analysis. In this project we explore series supervised machine learning. | * Machine learning algorithm. * Linear Regression. * Support vector machine. * Gaussian Naive Bayes | **APPLIED DATA**  **SCIENCE** | * Giving water quality as better to living creatures * Examing the factors such as PH value, oxygen and nutrient level |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.NO | TITLE | PROPOSED WORK | TOOLS USED /  ALGORITHM | TECHNOLOGY | ADVANTAGE /  DISADVANTAGE |
| 2 | Assessment of ground water quality and its Impact. | Ground water quality Checking around the water conducted areas, and it is analyzed by the parameters such as PH value, electrical conductivity and dissolved solids. | * Neural Network /Multilayer perceptron (MLP) * Ridge Regression * Lasso Regression * Polynomial Algorithm | **APPLIED DATA**  **SCIENCE** | * Measuring the dissolved oxygen level. * Assessing the location of water will allow you to narrow down the water quality equipment |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.NO | TITLE | PROPOSED WORK | TOOLS USED /  ALGORITHM | TECHNOLOGY | ADVANTAGE /  DISADVANTAGE |
| 3 | Hydro chemical characterization of ground water | Water resources quality is most important in water efficiency. Based on analytical bases the chemicals like PH ,EC , TDS are the basic resources in water resources. | * Machine learning algorithm. * Linear Regression. * Support vector machine. * Gaussian Naive Bayes | **APPLIED DATA**  **SCIENCE** | * It will not evaporate that easily so that it can be used for many centuries * Reduction of water in streams and lakes |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.NO | TITLE | PROPOSED WORK | TOOLS USED /  ALGORITHM | TECHNOLOGY | ADVANTAGE /  DISADVANTAGE |
| 4 | Statistical and Analytical Evaluation of ground water quality | These techniques were applied to know the principal processes controlling the water chemistry. Fifty groundwater samples were analyzed for pH, electrical , conductivity(EC). | * Neural Network /Multilayer perceptron (MLP) * Ridge Regression * Lasso Regression * Polynomial Algorithm. | **APPLIED DATA**  **SCIENCE** | * Other potential benefit includes improving flows in rivers and streams, flood control and wildlife and bird habitat. * Ground water help to keep our rivers flowing. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.NO | TITLE | PROPOSED WORK | TOOLS USED /  ALGORITHM | TECHNOLOGY | ADVANTAGE /  DISADVANTAGE |
| 5 | Testing of Ground Water Quality For drinking purpose | It not only helps meet domestics, commercial, and industrial water needs, it also accounts for about one third of Asia’s drinking water supply . | * Neural Network /Multilayer perceptron (MLP) * Ridge Regression * Lasso Regression   Polynomial Algorithm. | **APPLIED DATA**  **SCIENCE** | * Water is essential element of our lives, giving life to all living creature on Earth. * Water quality testing can provide valuable data on the condition of a particular body of water. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.NO | TITLE | PROPOSED WORK | TOOLS USED /  ALGORITHM | TECHNOLOGY | ADVANTAGE /  DISADVANTAGE |
| 6 | Water Quality monitoring | Water chemistry analyses are carried out to identify and quantify the chemical components and properties of water samples. | * Neural Network /Multilayer perceptron (MLP) * Ridge Regression * Lasso Regression   Polynomial Algorithm. | **APPLIED DATA**  **SCIENCE** | * Advantage of this system are data accuracy, reliability and efficiency. * Protect state waters for the ways that we want and need to use them. |

***References:***

*1. PCRWR. National* ***Water Quality*** *Monitoring Programmed, Fifth Monitoring Report (2005–2006); Pakistan Council of Research in Water Resources Islamabad: Islamabad, Pakistan, 2007. Available online: http://www.pcrwr.gov.pk/Publications/Water%20Quality%20Reports/Water%20Quality% 20Monitoring%20Report%202005-06.pdf (accessed on 23 August 2019).*

*2. PCRWR****. Water Quality of Filtration Plants****, Monitoring Report; PCRWR: Islamabad, Pakistan, 2010. Available online: http://www.pcrwr.gov.pk/Publications/Water%20Quality%20Reports/FILTRTAION%20PLANTS% 20REPOT-CDA.pdf (accessed on 23 August 2019).*

*3. Gazzaz, N.M.; Yusoff, M.K.; Aris, A.Z.; Juahir, H.; Ramli, M.F****. Artificial neural network*** *modeling of the water quality index for Kinta River (Malaysia) using water quality variables as predictors. Mar. Pollut. Bull. 2012, 64, 2409–2420. [CrossRef]*

*4. Daud, M.K.; Nafees, M.; Ali, S.; Rizwan, M.; Bajwa, R.A.; Shakoor, M.B.; Arshad, M.U.; Chatha, S.A.S.; Deeba, F.; Murad, W.; et al. Drinking water quality status and contamination in Pakistan. BioMed Res. Int. 2017, 2017, 7908183. [CrossRef]*

*5. Alamgir, A.; Khan, M.N.A.; Hany; Shaukat, S.S.; Mehmood, K.; Ahmed, A.; Ali, S.J.; Ahmed, S. Public health quality of drinking water supply in Orangi town, Karachi, Pakistan. Bull. Environ. Pharmacol. Life Sci. 2015, 4, 88–94.*

**THANK YOU**

**Literature Survey**

**Team No** : 05

**Team ID** : PNT2022TMID08065

**College Name** : Adhiyamaan College of

Engineering(Autonomous)

**Department**  : Computer Science and Engineering

**Team Leader** : Rithik s

**Team Member** : Shanjai s s

**Team Member** : Vishnu s

**Team Member** : Gokul s