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| FUTURE SCOPE OF PROPOSED MODEL | Abstract  No life in earth sustain without water. Prevention of water is an essential way to save our mother nature. The proposed document emphasis the current and future scope of the model designed by ICC2020 team to save water. “A Penny saved is a penny gained”, We aimed at creating awareness among individual by monitoring water usage and intimating if water usage is not economic  ICC2020 - Team |

**Version 1:**

* Deals with water usage monitoring in a single house.
* Leakage is taken into account and user-friendly notifications on leakage is intimated in this model.
* Dashboards to show the water usage trend to know the usage pattern of the monitored house.
* Ground water calculation is replaced with a central reservoir due to the complexities in calculating Ground water in volumes.
* Ground water recharge level is also taken into account as percentage of water usage.
* Machine learning models are created based on obtained data to predict “Day Zero”.
* The proposed model can be implemented for a small flat constructions or a nuclear house model.

**Version 2:**

* Implementation of real time IoT sensors to calculate water usage and Leakage in an individual house or a flat.
* Calculation of water recharge value from real time data including following major factors,
  + Rainfall in the particular area (API or model Rain gauges will be implemented)
  + Atmospheric temperature, which results in evaporation of water.
* Recharge is planned to be calculated based on **HELP** (**H**ydraulic **E**valuation of **L**andfill **P**erformance) model, which is a numeric model that uses climate and soil data to arrive at recharge estimate.

**Version 3:**

* The third version upgradation includes calculation of Day Zero by using the dynamic data obtained from the previous usage.
* We thought that the above said prediction criteria will provide the prediction more accurately.
* Implementation of the proposed model in a well-developed community gardens or gated community villas with real time usage calculation for usage and leakage.
* Developing a user-friendly mobile app, to register their houses and mobile numbers to get intimation for leakage.
* Dashboards can be generated to reach the end user to know their usage pattern live in their mobile app.
* Water saving methods will also be suggested based on their leakage and usage data

**Version 4:**

* Implementation of reality ground water relation is planned in this version.
* The version includes measuring the Ground water level by using Spectro lyser, a sensor to measure the ground water level.
* Relationship between usage and amount of ground water reduced will be measured on a longer run – which will not be obtained in a shorter span.
* Assuming that ground is available until particular depth, the prediction model will be obtained with usage-ground water relationship.
* Using the prediction model, approximate water availability prediction will be done and communicated to end user.

**Road Map to Implement Ground Water Dashboard Prototype**