HACK'NDORE
<CRACK THE CODE TO DIGITAL INDORE/>

WATER SUPPLY MANAGEMENT

जलनीति
जल है तो कल है

BY GREEN GUARDIANS

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July 2024

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PROBLEM STATEMENT & OBJECTIVES

Key Issue: Absence of Water Management System

Challenges:

- Inability to identify water wastage and leakage
- Difficulties in ensuring equitable distribution of water.
- Lack of data to support decision-making for maintenance and upgrades of the water supply system

SOLUTION

Sensor based Water Meter System

- Install sensors at end-point of water supply (homes).
- Sensor connected to Water Meter (Smart Meter).
- Data Collection using API.
- Data Storage at Cloud Server (Quantity & Duration)
- Algorithms to identify point of Leakage

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SENSOR BASED WATER METER

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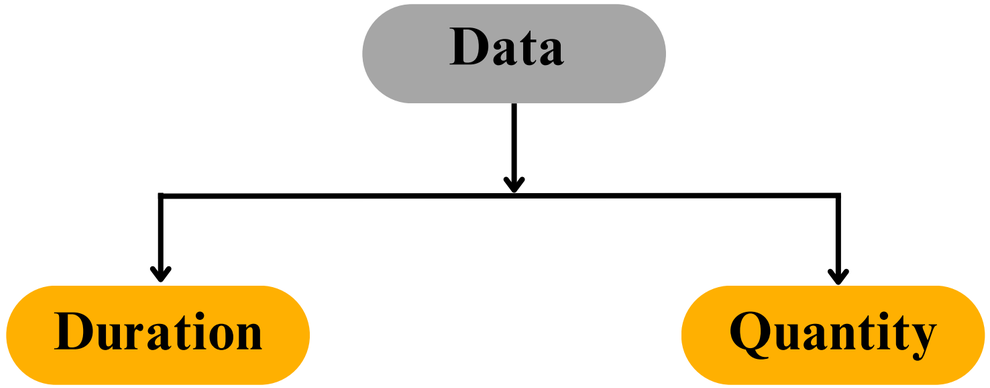
DATA COLLECTION



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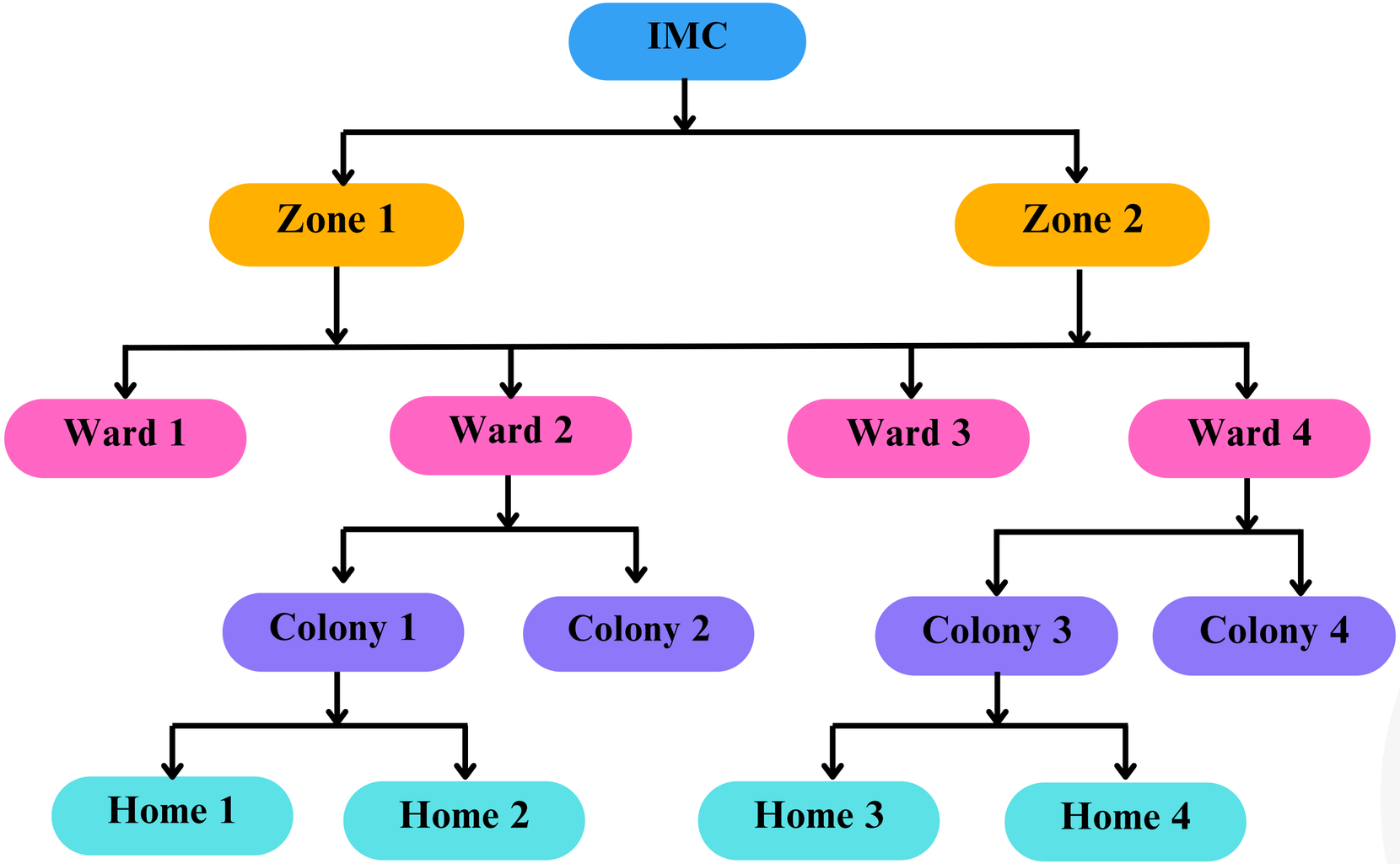
HIERARCHIAL MONITORING



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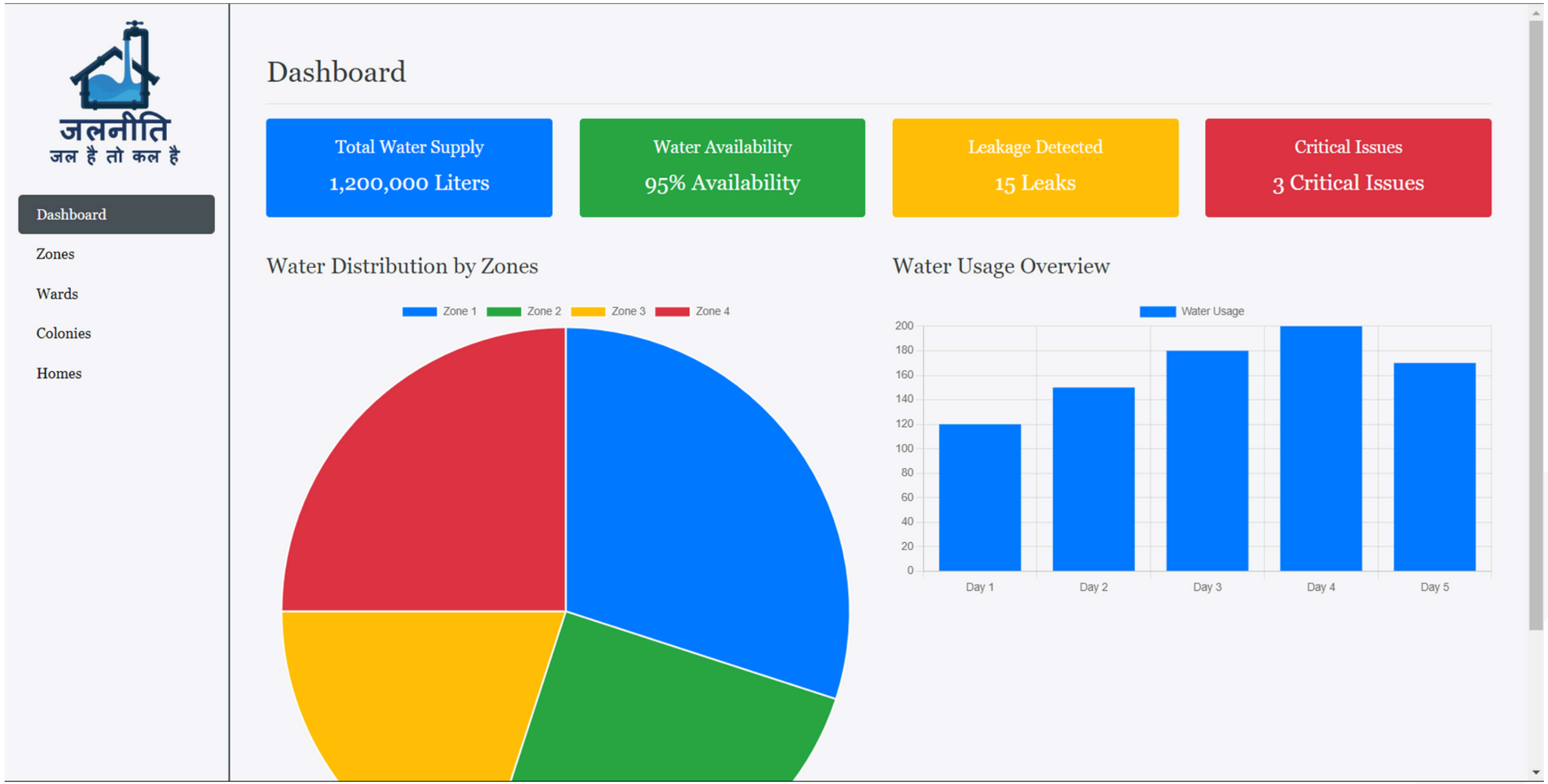

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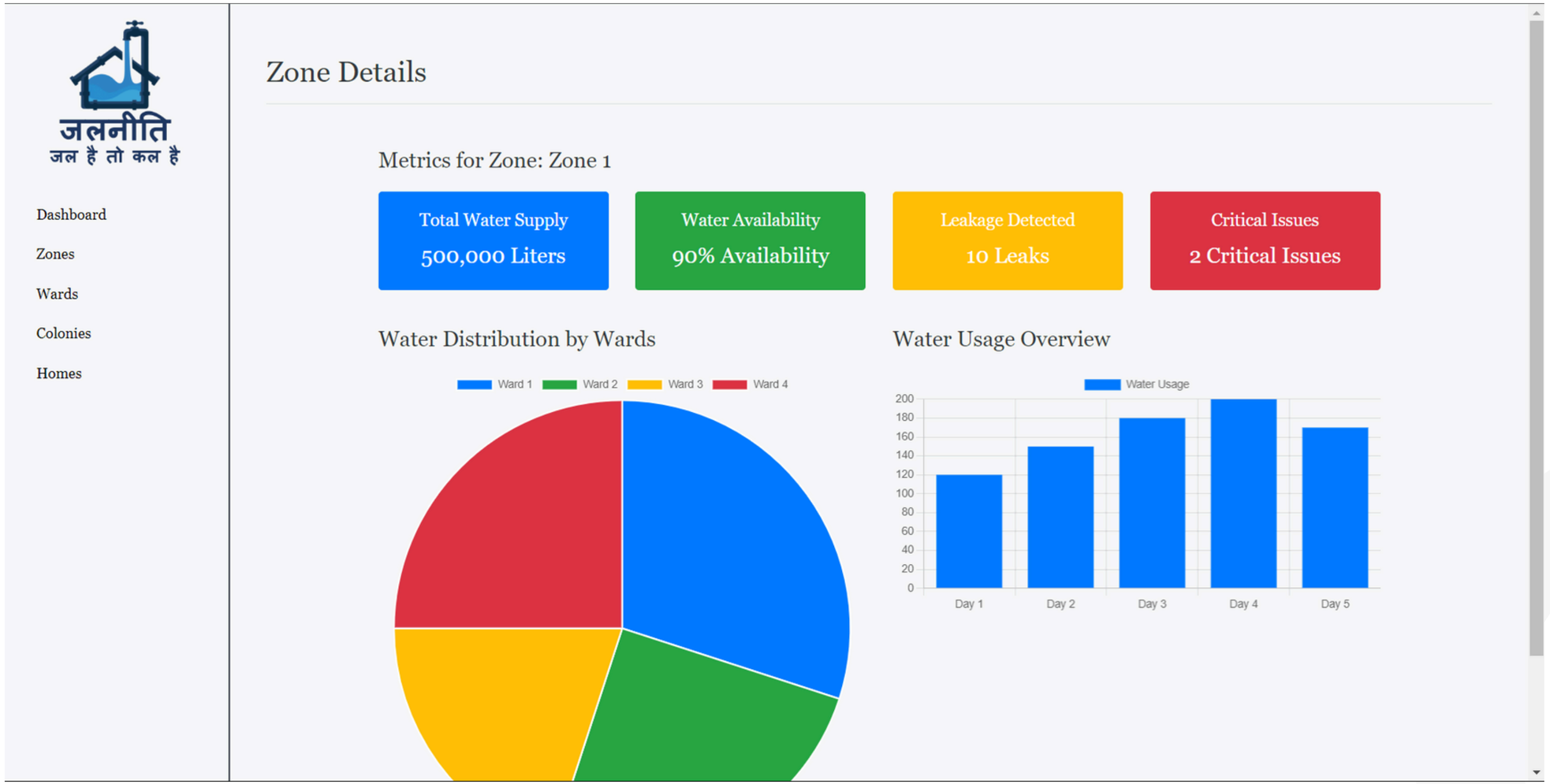
DASHBOARD



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ALGORITHM

```python
rf_classifier = RandomForestClassifier(n_estimators=100, random_state=42)
rf_classifier.fit(X_train, y_train_class)


y_pred_class = rf_classifier.predict(X_test)
precision = precision_score(y_test_class, y_pred_class)
recall = recall_score(y_test_class, y_pred_class)
f1 = f1_score(y_test_class, y_pred_class)
accuracy = accuracy_score(y_test_class, y_pred_class)

print(f"Precision: {precision}")
print(f"Recall: {recall}")
print(f"F1 Score: {f1}")
print(f"Accuracy: {accuracy * 100:.2f}%")
```

```
Mean Squared Error: 0.41804173427980645
R2 Score: 0.7941526105878755
Precision: 0.911614730878187
Recall: 0.9252443933294997
F1 Score: 0.91837899543379
Accuracy: 90.47%
```

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LIMITATION

Installation Cost

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THANK YOU

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