BVRIT HYDERABAD
College of Engineering for Women
Department of Information Technology
Mini Project - Academic Year 2023-24

TEAM 7

Instant Health Scan using ML & DL

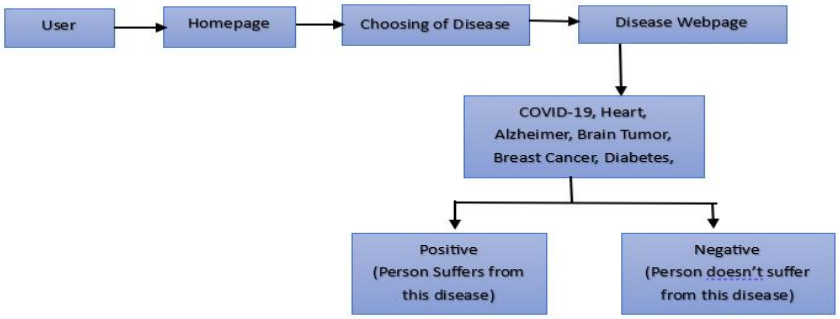
Abstract

The healthcare sector, benefiting from technological advancements, faced challenges in access during the Covid-19 pandemic. Our project addresses this by replacing doctor consultations with faster, more precise results. Focusing on seven diseases, including infectious diseases, neurological conditions, chronic ailments, and cancer, we adopt a comprehensive approach. Integrating machine learning and deep learning techniques, our hybrid strategy promises a robust disease detection framework. Aligned with evolving healthcare needs, our initiative leverages technology to enhance access and accuracy, alleviating burdens from traditional practices. In essence, we aim to transform healthcare by embracing advanced technologies for more efficient and accessible outcomes.

Modules

- Imaging Diagnostics (Alzheimer's, Brain Tumor, Pneumonia, COVID-19)
- Data-Driven Disease Prediction (Heart, Diabetes, Breast Cancer)

Architecture



Tools and Technologies

- **Jupyter Notebook**
- **Python**

Conclusion and Future Scope

This groundbreaking project seamlessly combines Convolutional Neural Networks (CNNs) for image analysis with classical machine learning algorithms (Random Forest and XGBoost) to detect seven diseases accurately. The integration of AI demonstrates its versatility in medical diagnostics, promising a more efficient and accessible disease detection process. Future prospects include expanding disease detection to rare conditions and improving AI explainability for increased transparency and trust among healthcare professionals and patients.

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Github links

1. https://github.com/shivanialane / Instant_Health_Scan
2. https://github.com/renusreeja / Instant_Health_Scan
3. https://github.com/sahithikolusu2002/Instant_Health_Scan