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MIT WORLD PEACE UNIVERSITY | PUNE
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

Application to predict diseases based on haematological reports and provide recommendations to specialists

Request for Haematological Data access for college-backed Capstone Project

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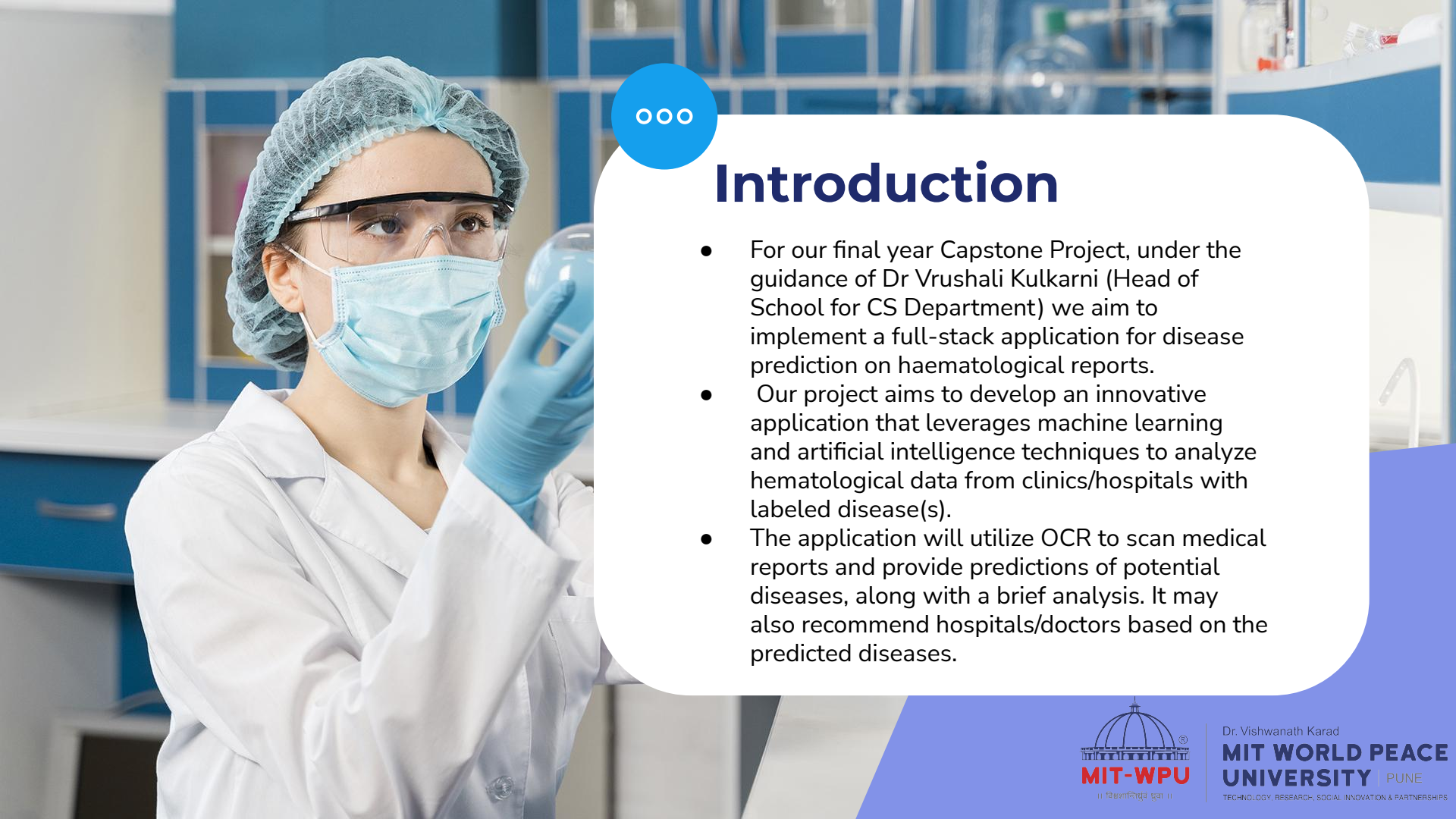


Introduction

- For our final year Capstone Project, under the guidance of Dr Vrushali Kulkarni (Head of School for CS Department) we aim to implement a full-stack application for disease prediction on haematological reports.
- Our project aims to develop an innovative application that leverages machine learning and artificial intelligence techniques to analyze hematological data from clinics/hospitals with labeled disease(s).
- The application will utilize OCR to scan medical reports and provide predictions of potential diseases, along with a brief analysis. It may also recommend hospitals/doctors based on the predicted diseases.

Aim/Objective

- Our main objective is to revolutionize medical diagnosis by developing a cutting-edge application that can analyze hematological data and provide personalized health recommendations.
- We strive to empower healthcare providers and patients with valuable insights to make informed decisions about their health, ultimately leading to improved patient outcomes.

Team Introduction

Dr Vrushali Kulkarni (Mentor)

Head of School for Computer Science, MIT WPU , PhD in Machine Learning, has published papers in various National / International conferences and journals

01

Aniket Sharma

Application development expert with extensive experience in React JS and Node JS, with a strong background in data processing.

02

Ayush Shrivastav

Data scientist and computer vision specialist, currently working as an intern at Quidich Innovation Labs, with expertise in AI, ML, and data analysis.

03

Pranav Nirmal

AI, ML, and data science specialist with previous experience as an intern at Volkswagen, bringing expertise in developing advanced algorithms and models.

04

Preetika Sastry

With prior experience as a Volkswagen intern, this AI, ML, and data science professional has skills in designing deep model architectures

Scope

Our project will focus on gathering hematological data from clinics/hospitals with labeled disease(s), and training a ML or AI model on the textual data to provide accurate disease predictions. The application will have an OCR feature that can scan medical reports and provide insights on potential diseases, along with recommendations for hospitals/doctors.

Scope

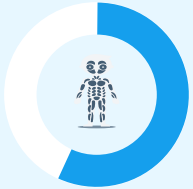
Data Processing

Data preprocessing and training model

Report scanning

OCR extracting features from report

Disease Prediction



Prediction of likely diseases and doctor/hospital recommendation

Data Requirement

We require hematological data consisting of textual attributes, without any personal information such as names, addresses, or any other identifying details.

The data can be disease-specific or cover multiple diseases, and will be used solely for the purpose of training the machine learning or artificial intelligence model to provide accurate disease predictions.

If possible, this data would ideally include the diagnosis made by the doctor (eg. Dengue Positive/Negative)

Data Handling and Confidentiality

We understand the importance of data privacy and confidentiality. Rest assured, we will handle the data obtained from clinics/hospitals with the utmost responsibility and ensure that it is stored securely. Personal information will not be used in the model training or for any other purpose. We will comply with all applicable data protection laws and regulations to ensure the data is used only for the intended purpose of improving healthcare outcomes.

Conclusion

- In conclusion, our project aims to develop an innovative application that utilizes advanced technologies like machine learning and artificial intelligence to analyze hematological data and provide personalized health recommendations.
- With a highly skilled team and responsible data handling practices, we are confident in the success and impact of our project.
- Thank you for considering our proposal, and we look forward to your support in bringing this project to fruition.