

#### Marathwada Mitra Mandal's COLLEGE OF ENGINEERING, Karvenagar,

Pune - 52 An Autonomous Institute

Website: <a href="mailto:www.mmcoe.edu.in">www.mmcoe.edu.in</a> email id: <a href="mailto:mmcoe@mmcoe.edu.in">mmcoe@mmcoe.edu.in</a>

Date: 12/07/2024

Project Group No	04	Week No
Problem Statement	Testing and Classification of soil for purpose of Plant Cultivation	
Name of activity	Project Overview & Base Paper Review	
Roll No	Student Name	Sign
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Introduction to the base paper, understanding the problem and proposed approach.

#### Current week task completion status :

Finalized the research paper to use as a foundation for the project.

#### Task Allocated for next week:

Investigate datasets mentioned in the base paper.

#### Work Completion status:

Base paper and project scope reviewed.



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Date: 19/07/2024

Project Group	04	Week No
No		
Problem	Testing and Classification of soil for purpose of Pl	ant
Statement	Cultivation	
Name of activity	Dataset Exploration & Selection	
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Roll No	Student	Sign
	Name	
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Identified key datasets referenced in the research paper; explored options to acquire data.

#### Current week task completion status:

Found datasets, examined their structure, and assessed the quality.

#### Task Allocated for next week:

Start cleaning and preprocessing the dataset for use.

#### Work Completion status:

Dataset review and acquisition completed.



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Date: 26/07/2024

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Project Group	04	Week No
No		
Problem	Testing and Classification of soil for purpose of Plant	
Statement	Cultivation	
Name of activity	Data Cleaning & Preprocessing	
Roll No	Student Name	Sign
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	_
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Discussed techniques for data cleaning and preprocessing based on the methods in the base paper.

#### Current week task completion status:

Data preprocessing started (handling missing values, normalization).

#### Task Allocated for next week:

Implement feature selection as suggested in the base paper. Work Completion Status: Data cleaning underway

#### Work Completion status:

Data cleaning underway.



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Date: 02/08/2024

Project Group	04	Week No
No		
Problem	Testing and Classification of soil for purpose of Plant Cultivation	
Statement		
Name of activity	Feature Selection & Engineering	
Roll No	Student	Sign
	Name	
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Review of feature engineering methods, including selection of relevant features based on the base paper.

#### Current week task completion status:

Completed feature engineering and selection.

#### Task Allocated for next week:

Start developing models mentioned in the base paper, experiment with basic ML models.

### Work Completion status:

Data preprocessing and feature selection completed.



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Date: 09/08/2024

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Project Group	04	Week No
No		
Problem	Testing and Classification of soil for purpose of Plant Cultivation	
Statement		
Name of activity	Initial Model Development	
Roll No	Student	Sign
	Name	
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Review of ML algorithms used in the base paper, including decision trees, CNN, or SVM.

#### Current week task completion status:

Developed and tested initial ML models (Random Forest, Decision Tree).

#### Task Allocated for next week:

Implement CNN model, as suggested in the paper, for image classification tasks.

#### Work Completion status:

Basic ML model development.



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Date: 16/08/2024

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Project Group	04	Week No
No		
Problem	Testing and Classification of soil for purpose of Plant	
Statement	Cultivation	
Name of activity	CNN Model Implementation	
Roll No	Student	Sign
	Name	
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Feedback on CNN implementation and its relevance to plant disease classification.

#### Current week task completion status:

Implemented CNN-based deep learning model, initial test results.

#### Task Allocated for next week:

Fine-tune the CNN model by adjusting layers, dropout, and filters

#### Work Completion status:

CNN model implemented.



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Date: 23/08/2024

Project Group	04	Week No
No		
Problem	Testing and Classification of soil for purpose of Plant	
Statement	Cultivation	
Name of activity	Hyperparameter Tuning & Optimization	
Doll No	Student	Cian
Roll No		Sign
	Name	
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Hyperparameter tuning strategies for CNN, improving model accuracy and generalization.

#### Current week task completion status:

Optimized CNN parameters and achieved better performance.

#### Task Allocated for next week:

Begin integrating the model into a basic user interface for real-time predictions.

#### Work Completion status:

CNN model tuning and optimization completed.



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Date: 30/08/2024

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Project Group No	04	Week No
Problem Statement	Testing and Classification of soil for purpose of Plant Cultivation	
Name of activity	UI Development & Model Integration	
Roll No	Student Name	Sign
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

User interface design principles; integration of model into the frontend as outlined in the paper.

#### Current week task completion status:

Created a simple UI to visualize model results.

#### Task Allocated for next week:

Finalize UI, add features like image upload for disease prediction.

#### Work Completion status:

Basic UI integrated.



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Date: 06/09/2024

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Project Group No	04	Week No
Problem Statement	Testing and Classification of soil for purpose of Plant Cultivation	
Name of activity	UI Refinement & Feature Addition	
Roll No	Student Name	Sign
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Discuss UI improvements, real-time prediction features, and possible enhancements.

#### Current week task completion status:

Completed UI enhancements and refined prediction functionality.

#### Task Allocated for next week:

Prepare for mid-term presentation, focusing on project methodology and results.

#### Work Completion status:

UI improvements made.



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Date: 13/09/2024

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Project Group No	04	Week No
Problem Statement	Testing and Classification of soil for purpose of Plant Cultivation	
Name of activity	Mid-Term Presentation Preparation	
Roll No	Student Name	Sign
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Discuss presentation format, research highlights, and results from initial testing.

#### Current week task completion status:

Drafted slides for presentation; discussed project achievements.

#### Task Allocated for next week:

Finalize presentation and practice delivering it.

#### Work Completion status:

Presentation draft completed.



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Date: 27/09/2024

Project Group No	04	Week No
Problem Statement	Testing and Classification of soil for purpose of Pl	ant Cultivation
Name of activity	Mid-Term Presentation & Feedback	
Roll No	Student	Sign
Kon No	Name	Sign
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Refining the presentation based on feedback, focusing on technical aspects and challenges.

#### Current week task completion status:

Improved presentation flow, added more results and insights.

#### Task Allocated for next week:

Start reviewing research papers for literature review section.

#### Work Completion status:

Mid-term presentation finalized.



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Date: 11/10/2024

Project Group No	04	Week No
Problem Statement	Testing and Classification of soil for purpose of Plant Cultivation	
Name of activity	Literature Review	
Roll No	Student Name	Sign
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

How to approach literature review, importance of identifying gaps in existing research.

#### Current week task completion status:

Reviewed 3 research papers relevant to plant disease prediction.

#### Task Allocated for next week:

Complete the review of remaining papers, identify key methodologies.

#### Work Completion status:

Literature review phase started.



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Date: 15/10/2024

Project Group No	04	Week No	
Problem Statement	Testing and Classification of soil for purpose of Plant Cultivation		
Name of activity	Comprehensive Literature Review		
Roll No	Student Name	Sign	
BI15	Shubham Dhobale		
BI12	Anushka Chavan		
BI65	Aditya Shivarkar		
BI42	Shivani Kulkarni		

#### Points Discussed with Guide:

Reviewed 5 research papers and compared methodologies; identify best practices.

#### Current week task completion status:

Completed literature review

#### Task Allocated for next week:

Begin drafting research paper, focusing on methodology and results.

#### Work Completion status:

Research paper review completed.



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Date: 08/11/2024

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Project Group	04	Week No
No		
Problem	Testing and Classification of soil for purpose of Plant Cultivation	
Statement		
Name of activity	Research Paper Drafting	
Roll No	Student	Sign
	Name	
BI15	Shubham Dhobale	
BI12	Anushka Chavan	
BI65	Aditya Shivarkar	
BI42	Shivani Kulkarni	

#### Points Discussed with Guide:

Draft outline for research paper and structure; discussed writing style and sections to focus on.

#### Current week task completion status:

Started drafting the research paper (introduction, methodology).

#### Task Allocated for next week:

Continue writing, focus on analysis and conclusion.

#### Work Completion status:

Research paper drafting underway.