



FINAL YEAR PROJECT REPORT

CROP PREDICTION ACCORDING TO WEATHER

**In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCES)**

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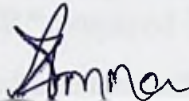
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DECLARATION

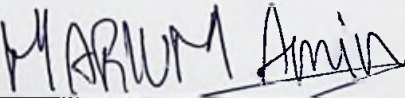
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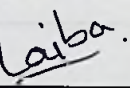
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We would like to thank everyone who contributed to the successful completion of this project. We would like to express my gratitude to my project supervisor, Miss Asma Zahedi, for her valuable advice, guidance, and her continuous patience throughout the development of this project.

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CROP PRODUCTION ACCORDING TO WEATHER

ACKNOWLEDGEMENTS

We would like to thank everyone who contributed to the successful completion of this project. We would like to express my gratitude to my project supervisor, Miss Asia Samreen, her invaluable advice, guidance, and her enormous patience throughout the development of the research.

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CROP PREDICTION ACCORDING TO WEATHER

ABSTRACT

The project aims to develop a user-friendly web application to predict suitable crops based on weather conditions in Pakistan's agriculture sector. The application will also provide recommendations on alternative crops that can survive adverse climatic conditions in addition to the forecast of primary crop selection.

In addition, it will provide farmers with information on the required soil types and optimal levels of fertilizers for each recommended crop, to provide them with tailored guidance. Our study enhances the methods of crop prediction, enables farmers to benefit from valuable decision-making tools, and increases agricultural productivity by using a variety of machine-learning algorithms including Logistic Regression, Random Forest, K-Nearest Neighbours (KNN), Naive Bayes, Decision Tree, and Support Vector Machine (SVM)

Following Agile methodology, we iteratively refine software construction, leveraging collaboration and adaptability. We also apply the Agile principles to enhance software functionality through the integration of new data in machine learning. Given factors like temperature, humidity, and rainfall, our methodology involves full data collection, thorough cleaning, and pre-processing. In the end, we are aiming to create a simple interface for widespread access to information and decision-making in Pakistan's agricultural landscape so that it can contribute to the financial stability of the country. Our Project predicts the crop yielding results with approx. 90% accuracy. It also provides alternative ways to the farmers for better results in future.

CHAPTER 3

REQUIREMENT ANALYSIS

TABLE OF CONTENTS

DECLARATION	ii
APPROVAL FOR SUBMISSION	iii
ACKNOWLEDGEMENTS	v
ABSTRACT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF SYMBOLS / ABBREVIATIONS	xii
LIST OF APPENDICES	xiii
CHAPTER 1	1
INTRODUCTION	1
1.1 Background	1
1.1.1 Agriculture as an Economic Backbone:	1
1.1.2 The Evolution of Farming Practices:	1
1.1.3 The Emergence of Smart Farming:	1
1.1.4 Challenges and Opportunities:	1
1.2 Importance of Agriculture in Pakistan	2
1.3 Challenges Faced in Pakistani Agriculture:	3
1.4 Relationship between AI and Agriculture	5
1.4.1 How is Machine Learning used in Agriculture?	6
1.4.2 What is the ML Process?	6
1.5 Problem Statement	6
1.6 Aims and Objectives	7
1.7 Scope of Project	7
CHAPTER 2	8
LITERATURE REVIEW	8
2.1 Background	8
2.2 Related Works	8

CHAPTER 3	16
REQUIREMENT SPECIFICATIONS	16
3.1 Existing System	16
3.1.1 SenCrop	16
3.1.2 CropProphet	17
3.2 Proposed System	18
3.3 Requirements Specifications	18
3.3.1 Hardware Requirements:	18
3.3.2 Software Requirements:	18
3.3.3 User Requirements:	18
3.4 Use Case Diagram	19
CHAPTER 4	20
DESIGN AND METHODOLOGY	20
4.1 Block Diagram (Data Modelling)	20
4.1.1 Design and Methodology for Crop Prediction Model:	20
4.2 Block Diagram (Front-End)	24
4.2.1 Design and Implementation	24
CHAPTER 5	26
SYSTEM IMPLEMENTATION	26
5.1 Front End- Implementation	26
5.1.1 Location:	26
5.1.2 Soil Analysis	27
5.1.3 Main Loop	29
5.2 Modelling Implementation:	33
5.2.1 Applying Z-Score	33
5.2.2 One Hot Encoding	34
5.2.3 Splitting and Scaling	35
5.2.4 Taking User Input	35

CHAPTER 6	37
SYSTEM TESTING AND EVALUATION	37
6.1 Testing	37
6.2 Unit Testing:	37
6.2.1 Test Case 1: ARE THE BUTTONS IN THE LANDING PAGE ROUTING TO THE CORRECT LOCATION?	37
6.2.2 Test Case 2: IS THE API GIVING THE WEATHER INFORMATION?	41
6.2.3 Test Case 3: ARE THE USER INPUTS BEING VALIDATED?	42
6.2.4 Test Case 4: IS THE MODEL GIVING PREDICTIONS?	43
CHAPTER 7	44
CONCLUSION	44
7.1 Summary	44
7.2 Implications and Applications:	44
7.3 Limitations and Future Decisions:	44
7.4 Contribution to the Field:	45
7.5 Closing Remarks:	45
REFERENCES	46
APPENDICES	48