

2017-2018

Project Report

On

**DIGIT RECOGNITION SYSTEM**

**Submitted by:**  **Guided By:**

**Group no:** G-1 Mrs.P.S.Bangare

**1.**Priyanka Sharma (Roll no: 51)

**2.**Jain Samkitkumar Hasmukhlal (Roll no: 20)

**3.**Husain Poonawala (Roll no: 47)

**4.**Prachin Ranawat (Roll no: 55)



CERTIFICATE

This is to certify that **“Digit Recognition System”** embodies the original work done by **Priyanka Sharma, Jain Samkitkumar Hasmukhlal, Husain Poonawala, Prachin Ranawat** during this project submission as a partial fulfilment of the requirement for the Mini-Project in the subject Advance Databases of B.E. Degree, VII Semester, of Pune University during the academic year 2017-2018.

**Date:**

**Place:** Pune

Project Guide Head of Department Principal

(Prof. P. S. Bangare) (Prof. A. Adapanawar) (Dr. K. P. Patil)

**Acknowledgement**

We are very thankful and want to express our gratitude to Prof. P. S. Bangare for guiding us in right manner, correcting our doubts by giving us their time whenever required, and sharing their knowledge and experience in making this project.

We are also thankful to the HOD of our Information Technology department Prof. A. Adapanwar for all the moral support and motivation he has provided to us in making this project.

A very humble thanks to our Principal Dr. K. P. Patil who gave us constant support and motivation which is surely reflected in our project.

We express our sincere gratitude towards our cooperative department who has provided us with valuable assistance and requirements for the system development.

**Signature**

Priyanka Sharma

Jain Samkitkumar Hasmukhlal

Husain Poonawala

Prachin Ranawat

# CONTENTS

|  |  |  |
| --- | --- | --- |
| **S.NO** | **Title** | **Page No** |
| **1.** | **Abstract** | 1 |
| **2.** | **Introduction**   * 1. Purpose | 2 |
| **3.** | **Scope** | 3 |
| **4.** | **Requirements**  4.1 NetBeans  4.2 Hadoop  4.3 HBase | 4 |
| **5.** | **Data modelling** | 6 |
| **6.** | **Database Design**  6.1 Dataset | 7 |
| **7.** | **Algorithm**  7.1 Random Forest Algorithm  7.2 Features of Random Forest Algorithm | 8 |
| **8.** | **Graphical User Interface** | 11 |
| **9.** | **Source Code** | 13 |
| **10.** | **Testing Document** | 19 |
| **11.** | **Conclusion** | 20 |

**LIST OF FIGURES**

|  |  |  |
| --- | --- | --- |
| **Fig. No** | **Title** | **Page No** |
| 5.1 | Data Model | 6 |
| 6.1 | Dataset | 7 |
| 7.1 | Ensemble Model | 10 |
| 8.1 | Training Data | 11 |
| 8.2 | Random Forest Output | 11 |
| 8.3 | Prediction Result | 12 |
| 8.4 | Settings | 12 |

**LIST OF TABLES**

|  |  |  |
| --- | --- | --- |
| **Table No** | **Title** | **Page No** |
| 1. | Testing Document | 19 |