# Samarjit Pal

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## **ACADEMIC DETAILS**

| Examination                   | University                       | Institute       | Year         | CPI/% |
|-------------------------------|----------------------------------|-----------------|--------------|-------|
| UnderGraduate Specialization: | Computer Science and Engineering |                 |              |       |
| Under Graduation              | IIIT Dharwad                     | IIIT Dharwad    | 2016-present | 9.28  |
| Intermediate Specialization:  | PCM + (Electronics)              |                 | -            |       |
| Intermediate                  | BJB college                      | BJB Jr. College | 2015         | 85.67 |
|                               |                                  |                 |              |       |
| Matriculation                 | BSE,Odisha                       | SSVM,Nayagarh   | 2013         | 92.3  |

#### FIELDS OF INTEREST

 Machine Learning and AI, Computer Vision, Probability theory, Algorithms and Combinatorics, Android App Development

## RESEARCH EXPERIENCE

# • Bank Product Recommendation System

(Supervisor :Mr. Sandeep Kumar Jun-July'19)

- Objective :Built a system to recommend bank products which are relevant to users.
- Performed exploratory analysis on dataset for feature engineering to extract most important features
   Used xgboost as multiclass classifier to obtain minimal logloss. After exctracting most important features did feature engineering to build the decision tree.

## **ACADEMIC PROJECTS**

## • Efficient Insurance System Using Blockchain

(Guide:Dr. Rajendra Hegade Apri'19)

- o Objective Provide a secure system for insurance using blockchain.
- Built a system to implement efficient insurance system which is more reliable, secure, transparent
  then the present system used blockchain technology as it will help the system be more reliable and
  transparent. The system is created to connect peers, namely customer, insurance, police, service center
  shop and to deploy a fully working system so that the peers can do successful transaction among
  themselves.

## • Topic Modelling using LDA

(Guide:Dr. Arun Chauhan Dec'18)

- o Objective: Built a System to classify any document based on the topic
- Built an model to identify all the topics used in the documents using LDA. Data cleaning was done
  using NLTK python then applied the algorithm to find the probability distribution of all the topics
  according to the document.

## • Online Cinema Booking System

(Guide:Dr. Neha Bharil Dec'18)

- o Objective: Built a fully functional Online Cinema ticket booking system
- Built an serverside application for online cinema ticket booking handeling multiple queries with the
  use of timestamp-ordering protocols and develope an UI and backend server using Mysql and PHP.
   Analyzed using different timestaping protocols for getting less response time.

## • Movie Recomandation System

(Guide:Dr. Lakshman Mahto Dec'17)

- o Objective :Provide a mechanism to classify users with similar interest
- Built a Collaborative filtering model and implemented PCA for dimensionality reduction for faster computation and predict the vector similarity Cosine similarity

#### **SELF PROJECTS**

#### Sudoku Solver

( Dec'18)

- Objective : Solve Sudoku from an Image
- Built a Digit recognition tool in Python and trained the model using CNN which recognizes the digit from an input Image of a sudoku board and forms the grid then uses backtracking algorithm to solve and show the result.

## • Hand Gesture Recognition Tool

( Feb'17)

- o Objective: Perform tasks using Hand Gesture recognition.
- Built a Gesture recognition tool in Python which records lateral hand movements to perform tasks like toggle apps, control volume, and other features.

## • OMR sheet Checker

( Oct'17)

- o Objective :Bubble sheet multiple choice scanner and test grader
- Developed a python program using Open Cv library for automatically analyzing human-marked documents and interpreting their results.

## **TECHNICAL SKILLS**

- Languages: C(Advanced), C++(Advanced), Python( Moderate ), Java(Advanced), C#( Moderate )
- Database : MySQL,SQLite, MicrosoftSQLServer
- Data Analytics : MATLAB, Numpy, GNUPlot, Keras
- Tools : Eclipse, LATEX, jupyter notebook
- Web Developement :HTML,CSS,JavaScript,PHP( Moderate )
- Software: OpenCV, NS-3, Wireshark, Android Studio, QtCreater, XAMPP, ArduinoIDE

## **COURSES UNDERTAKEN**

- Computer Science: Deep Learning, Machine Learning, Data Analytics, Artificial Intelligence, Computer Networks, Wireless Network Systems, Cryptography and Network Security, Computer Architecture, Operating Systems, Database and Information Systems, Discrete Structures, Data Structures and Algorithms, Design and Analysis of Algorithms
- Mathematics: Numerical Analysis, Calculus, Linear Algebra, Differential Equations, Abstract Algebra, Probability and Random Variables, Convex Optimization

#### **Other Activities**

- Secured 1st rank in Blockchain hackathon hosted by SandboxStartups
- Secured 1st rank in Regional Coding Compition hosted by Samsung and Codechef
- Attended Smart Governace IOT workshop by Prof. H S JAMADAGNI (DESE, IISC Bangalore)
- Participated in various quiz contests including Tata Crucible Mysore regionals

## **STRENGTHS**

• Adaptability, Learning agility, Creativity, Social Interaction, Hardworking.

## **INTEREST AND HOBBIES**

- Develop utility Android apps
- Solving Rubik's cube.
- Playing Chess.
- Playing Video Games.