A COMPREHENSIVE STUDY ON SOCIAL NETWORK MENTAL DISORDERS DETECTION

A

MAJOR PROJECT REPORT

Submitted in partial fulfillment of the requirements
for the award of the degree of

MASTER OF COMPUTER APPLICATION

Submitted to

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA,
BHOPAL (M.P.)

Submitted by

KESHAV	**[0115CA231053]**
KHUSHI SAHU	**[0115CA231057]**
SURAJ BISWAS	**[0115CA231128]**

Under the Guidance of

PROF. DEV NAGAR

DEPARTMENT OF MASTER OF COMPUTER APPLICATION

NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY BHOPAL

APRIL 2025

NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY BHOPAL

DEPARTMENT OF MASTER OF COMPUTER APPLICATION

DECLARATION

We hereby declare that the Project entitled "**A Comprehensive Study on Social Network Mental Disorder Detection**" is our own work conductedunder the supervision of **Prof. Dev Nagar, Assistant Professor, Department of Master of Computer Application, NRI Institute of Information Science & Technology, Bhopal.**

We further declare that to the best of our knowledge this report does not contain any part of work that has been submitted for the award of any degree either in this institute or in other institute without proper citation.

Keshav	**0115CA231053**
Khushi Sahu	**0115CA231057**
Suraj Biswas	**0115CA231128**

NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY BHOPAL

DEPARTMENT OF MASTER OF COMPUTER APPLICATION

CERTIFICATE

This is to certify that the work embodied in this project entitled **"A Comprehensive Study on Social Network Mental Disorder Detection"** being submitted by **Keshav (0115CA231053), Khushi Sahu (0115CA231057), Suraj Biswas (0115CA231128),** in partial fulfillment of the requirement for the award of the degree of the **Master of Computer Application (MCA)** to **Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal (M.P.)** is a record of bonafide piece of work, carried out by them under our supervision and guidance in the **Department of Master of Computer Application**, **NRI Institute of Information Science and Technology, Bhopal (M.P.).**

Guided by

Prof. Dev Nagar

Assistant Professor

Master of Computer Application

NIIST, Bhopal

Approved by

Dr. Shekhar Nigam

Professor & HOD

Master of Computer Application

NIIST, Bhopal

Principal

NIIST, Bhopal

NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY BHOPAL

DEPARTMENT OF MASTER OF COMPUTER APPLICATION

ACKNOWLEDGEMENT

We would like to express our special thanks of gratitude to our teacher **Prof. Dev Nagar, Assistant Professor** who gave us the golden opportunity to do this wonderful project on the topic **"A Comprehensive Study on Social Network Mental Disorder Detection"**, who also helped us in doing a lot of Research and we came to know about so many new things we are really thankful to him.

We would also like to express deep appreciation to our faculty members for providing the right environment, resources and encouragement to carry out this work. We are grateful to **Dr Shekhar Nigam, Prof. & HOD** for his insightful feedback and technical knowledge, which played a vital role in overcoming challenges during the development phase.

Finally, we would also like to thank our parents and also to all those people who directly or indirectly support us during our project.

Thanks again to all who helped us.

Keshav	**0115CA231053**
Khushi Sahu	**0115CA231057**
Suraj Biswas	**0115CA231128**

NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY BHOPAL

DEPARTMENT OF MASTER OF COMPUTER APPLICATION

ABSTRACT

This report includes a development presentation of an information system for managing the staff data within a small company or organization. The system as such as it has been developed is called Employee Management System. It consists of functionally related GUI (application program) and database. The choice of the programming tools is individual and particular.

Programming languages, paradigms and practices don't stand still very long. It often seems that the methods and techniques we applied yesterday are out of date today of course this rapid rate of change is also one of the things that keep programming existing. There is always something new on the horizon. One characteristic that is constant in software industry today is the "change". Change is one of the most critical aspects of s/w development and management. New tools and new approaches are announced almost every day. The impact of these developments is often very extensive. Most important among them is maintaining ability, reusability, portability, security, and integrity and user friendliness.

To build today's complex software, we need to wound construction techniques and program structures that are easy to comprehend, implement and modify in wide variety of situations.

NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY BHOPAL

DEPARTMENT OF MASTER OF COMPUTER APPLICATION

VISION

"The vision of the Computer Application department is to achieve excellent standards of quality education by keeping pace with rapidly changing technologies. It will be a customer-focused, cost-effective, well-run IT operation that is recognized for its responsiveness, flexibility, and effectiveness of the solutions it provides. "

MISSION

To provide technology leadership, expertise, and services in support of the teaching, learning, research, and outreach goals of the MCA department. Our Department is in support and committed to achieving its mission

REPORT STRUCTURE

The report must be organized in the following ***order***

- **Front cover**
- **Declaration**
- **Certificate**
- **Acknowledgement**
- **Abstract / Summary**
- **Course Outcomes**
- **Vision and Mission**

TABLE OF CONTENTS

(Note: Table of contents must include the following with page numbers.)

CHAPTER – 1

As we have seen that in recent years, there has been growing recognition of the importance of mental health and well-being. However, identifying and addressing mental health conditions in a timely manner remains a significant challenge. Traditional methods of monitoring mental health, such as clinical assessments and surveys, often suffer from limitations such as high cost, stigma, and delays in data collection and analysis. Mental health conditions, including depression, anxiety, and suicidal ideation, affect millions of individuals worldwide. Social media platforms have emerged as a valuable source of data for monitoring and understanding mental health trends and behaviors. This project aims to leverage natural language processing (NLP) techniques to analyze social media posts, particularly tweets from Twitter, posts from Facebook, Instagram and other social network to detect signs of mental health conditions and identify individuals at risk of suicidal ideation. By harnessing the power of social media data, we seek to provide early interventions and support for those in distress.

INTRODUCTION OBJECTIVE

Machine Learning Models for Linguistic Markers: Develop machine learning models capable of detecting linguistic markers and patterns indicative of mental health conditions, such as depression and suicidal ideation, with the help of social media posts.

Actionable Alerts for Timely Interventions: Provide actionable alerts generated by the system to mental health professionals, crisis intervention teams, and social media platform moderators. These alerts facilitate timely interventions and support for individuals identified as being at risk, thereby potentially preventing self-harm or suicide attempts. These objectives outline a comprehensive approach aimed at leveraging machine learning and real-time monitoring technologies to address mental health challenges on social media platforms effectively.

BENEFITS OF PROJECT

Here are some key benefits of conducting a comprehensive study on social network mental disorder detection**:**

Early Identification and Prevention – It detects mental health issues such as depression, anxiety, and stress at an early stage. It helps individuals seek professional help before conditions worsen.

Improved Public Mental Health – It raises awareness about mental health issues on social media. It

encourages a culture of support and understanding.

Personalized Mental Health Interventions – It provides tailored recommendations for users at risk. It suggests coping mechanisms, therapy, or professional consultation.

Enhancing Online Safety – It identifies harmful or suicidal tendencies and alerts relevant authorities. It helps social media platforms implement better content moderation policies.

Data-Driven Decision Making – It provides insights for policymakers and mental health organizations. It helps governments and NGOs develop mental health programs.

Integration with AI & Healthcare – It uses AI and machine learning to analyze user behavior patterns. It can integrate with telehealth services for quick assistance.

Reducing Social Media-Induced Stress – It helps users become aware of their mental state through sentiment analysis. It encourages healthier online habits and digital detox strategies.

SCOPE OF PROJECT

Identification of Mental Disorders: Depression, anxiety, stress, suicidal tendencies, and other mental health issues.

Targeted Social Media Platforms: Platforms such as Facebook, Twitter (X), Instagram, TikTok, and Reddit where users express emotions and thoughts.

Behavioral & Linguistic Analysis: Examining user posts, comments, likes, and interactions to detect symptoms. Sentiment analysis and psychological linguistic models to assess mental health risks.

Machine Learning & AI Models: Developing AI-driven models for mental health prediction. Using deep learning techniques like LSTM, BERT, and CNNs for text and image analysis.

Natural Language Processing (NLP): Sentiment analysis, topic modeling, and emotional state detection.

Big Data & Cloud Computing: Handling large-scale social media data. Cloud-based solutions for scalable and real-time detection.

Data Privacy & Anonymization: Ensuring user data is protected and anonymized.

Ethical AI Usage: Preventing bias in AI models to avoid misdiagnosis.

Legal & Regulatory Compliance: Adhering to GDPR, HIPAA, and other data protection laws.

Real-Time Monitoring Systems: Developing tools for live monitoring and detection.

Integration with Mental Health Services: Connecting users with professionals and helplines.

Public Awareness & Policy Development: Recommending policy measures for social media companies and governments.

Accuracy & False Positives: Ensuring AI does not misdiagnose normal behavior as a disorder.
User Consent & Ethical Boundaries: Addressing the debate over privacy vs. social good.
Dynamic Language & Trends: Keeping up with evolving slang and internet expressions in sentiment analysis.

IMPACT OF PROJECT

Early Detection and Intervention – Detecting mental health disorders early through social networks can help intervene before conditions worsen. Platforms like Facebook and Twitter have begun experimenting with tools to flag content that may indicate distress, potentially linking users to support resources.
Personalized Support and Treatment – Social network data could help healthcare professionals design more personalized interventions by tailoring treatment recommendations based on behavioral insights gleaned from social media activity.
Public Health Monitoring – Social media platforms offer a large-scale opportunity for monitoring mental health trends across populations. By tracking language trends and behavior changes, researchers and public health officials can gain insight into the mental health of entire populations or communities.

BREAK DOWN STRUCTURE OF PROJECT

Introduction & Background Research
Problem Statement – Understanding the impact of social media on mental health and Identifying the need for early detection and intervention.
Objectives – Develop AI-based techniques for mental disorder detection. Analyze behavioral patterns on social media platforms. Provide ethical and legal guidelines for responsible AI use.
Literature Review – Reviewing past studies on social media and mental health.Exploring existing AI and NLP methods for sentiment analysis.Identifying research gaps and improvement areas.
Data Collection & Preprocessing
Data Sources – Social media platforms (Facebook, Twitter, Instagram, Reddit, etc.). Publicly available mental health forums. Existing mental health datasets.
Data Preprocessing – Removing noise, irrelevant words, and formatting text. Preparing text for analysis. Extracting relevant linguistic and behavioral features. Addressing inconsistencies in datasets.

Methodology & Model Development

Machine Learning & AI Techniques – Natural Language Processing (NLP): Sentiment analysis, topic modeling. Supervised Learning**:** Training models using labeled mental health data. Deep Learning Models: LSTM, BERT, CNN for text classification.

Model Training & Validation – Splitting datasets into training, validation, and test sets. Evaluating performance using accuracy, F1-score, and recall. Optimizing models for real-time detection.

Implementation & System Development

Prototype Development – Web-based or mobile application for mental health analysis. Chatbot or AI assistant for preliminary assessments. Real-Time Monitoring & Alert System. Detecting warning signs in real-time. Sending notifications or intervention alerts when needed.

Integration with Mental Health Services – Connecting users with therapists, psychologists, or crisis help lines. Partnering with NGOs and mental health organizations.

Ethical, Privacy & Legal Considerations

Data Privacy Protection – Implementing anonymization techniques. Ensuring compliance with GDPR, HIPAA, and other regulations.

Ethical AI Implementation – Avoiding biases in model predictions. Balancing mental health support with user privacy.

Challenges & Limitations – Accuracy of AI models and false positives. Social and cultural differences in mental health expressions.

MODULE DISCRIPTION

Data Sources: Collects data from platforms like Twitter, Facebook, Instagram, and Reddit.

Text Preprocessing: Cleans text (removes noise, emojis, symbols).

Feature Extraction: Extracts keywords, sentiment, and linguistic patterns.

Data Anonymization: Ensures privacy compliance by removing identifiable information.

Sentiment Analysis: Classifies text as positive, negative, or neutral.

Emotion Recognition: Identifies stress, anxiety, depression, and suicidal tendencies.

Topic Modeling: Detects trending mental health topics in discussions.

Lexicon-Based & Machine Learning Approaches: Uses AI models like BERT and LSTM for text analysis.

Supervised & Unsupervised Learning: Uses labeled mental health data.

Deep Learning Integration: Implements CNN, LSTM, and transformers.

Evaluation Metrics: Assesses model accuracy, recall, and precision.

Model Optimization: Enhances performance for real-time detection.

Live Data Monitoring: Scans recent social media posts.

Risk Level Assessment: Categorizes users based on their mental health risk.

Automated Alerts: Sends notifications to support groups or mental health professionals.

User Consent & Ethical Safeguards: Ensures compliance with privacy laws.

Graphical Reports: Displays mental health trends over time.

User Behavior Analysis: Shows engagement, sentiment shifts, and crisis patterns.

Customizable Dashboards: Allows stakeholders to monitor real-time data.

GDPR & HIPAA Compliance: Protects user data privacy.

Bias Detection in AI: Minimizes discrimination in model predictions.

Consent & Transparency Measures: Notifies users about AI-based monitoring.

Regulatory Framework Adherence: Aligns with mental health laws and social media policies.

Chatbot Assistance: Offers self-help strategies and basic counseling.

Helpline Integration: Connects users with mental health professionals.

Community Support System: Engages peer support groups.

COST ESTIMATION

1. Research & Data Collection Costs

Component	Estimated Cost (USD)
Data acquisition (APIs, licensed datasets)	$2,000 - $5,000
Data preprocessing & cleaning tools	$500 - $1,500
Cloud storage for large datasets	$1,000 - $3,000
Data labeling (manual annotation for training AI models)	$3,000 - $7,000
Subtotal	$6,500 - $16,500

2. AI Model Development & Computational Costs

Component	Estimated Cost (USD)

Component	Estimated Cost (USD)
Machine learning model development	$5,000 - $10,000
Cloud computing (AWS, Google Cloud, Azure)	$3,000 - $8,000
GPU servers for deep learning	$4,000 - $10,000
Software & AI tools (TensorFlow, PyTorch, NLP libraries)	$2,000 - $5,000
Testing & validation of models	$2,000 - $6,000
Subtotal	$16,000 - $39,000

---

3. Software & Application Development

Component	Estimated Cost (USD)
Web or mobile application development	$7,000 - $15,000
Frontend & backend development	$5,000 - $12,000
Database management system	$2,000 - $5,000
API integration (social media platforms, AI models)	$3,000 - $6,000
Security & privacy implementation	$4,000 - $10,000
Subtotal	

---

4. Ethical, Legal & Privacy Compliance

Component	Estimated Cost (USD)
Legal consultation (GDPR, HIPAA compliance)	$5,000 - $10,000
Privacy & security audits	$3,000 - $7,000
Bias detection & fairness analysis	$2,000 - $6,000
Ethical AI policy documentation	$1,000 - $3,000
Subtotal	$11,000 - $26,000

5. Deployment & Maintenance Costs

Component	Estimated Cost (USD)
Cloud hosting & server costs	$2,000 - $6,000 (annually)
System monitoring & maintenance	$3,000 - $8,000 (annually)
User support & troubleshooting	$2,000 - $5,000
Future updates & improvements	$4,000 - $10,000
Subtotal	$11,000 - $29,000

6. Miscellaneous Costs

Component	Estimated Cost (USD)
Project management & team salaries	$10,000 - $30,000
Workshops & training for AI engineers	$2,000 - $5,000
Research publications & marketing	$3,000 - $8,000
Subtotal	$15,000 - $43,000

Total Estimated Cost

Category	Estimated Cost Range (USD)
Research & Data Collection	$6,500 - $16,500
AI Model Development	$16,000 - $39,000
Software & Application Development	$21,000 - $48,000
Ethical, Legal & Privacy Compliance	$11,000 - $26,000
Deployment & Maintenance	$11,000 - $29,000
Miscellaneous	$15,000 - $43,000

Category	Estimated Cost Range (USD)
Grand Total Estimate	$80,500 - $201,500

REQUIREMENT SPECIFICATION

Hardware Requirement

CPU : multi-core processors (e.g., Intel Xeon, AMD EPYC)

GPU: High-end GPUs NVIDIA A100

RAM: 64GB

Storage : 256GB SSD

Software Requirement

LANGUAGE: Python

Web Scraping Tool: Scrapy

Data Base: MySql

Text Mining Tool: Gensim, RapidMiner

Image and Video Analysis Tool: OpenCV, TensorFlow

Reporting Tool: Jupyter Notebooks

CHAPTER – 2

DATA ANALYSIS

Requirement Analysis

After analyzing the data collected, we formulated a number of requirements namely system hardware, software attribute. These were grouped as functional, non- functional and systems requirements.

Functional Requirements

The following is the desired functionality of the new system.

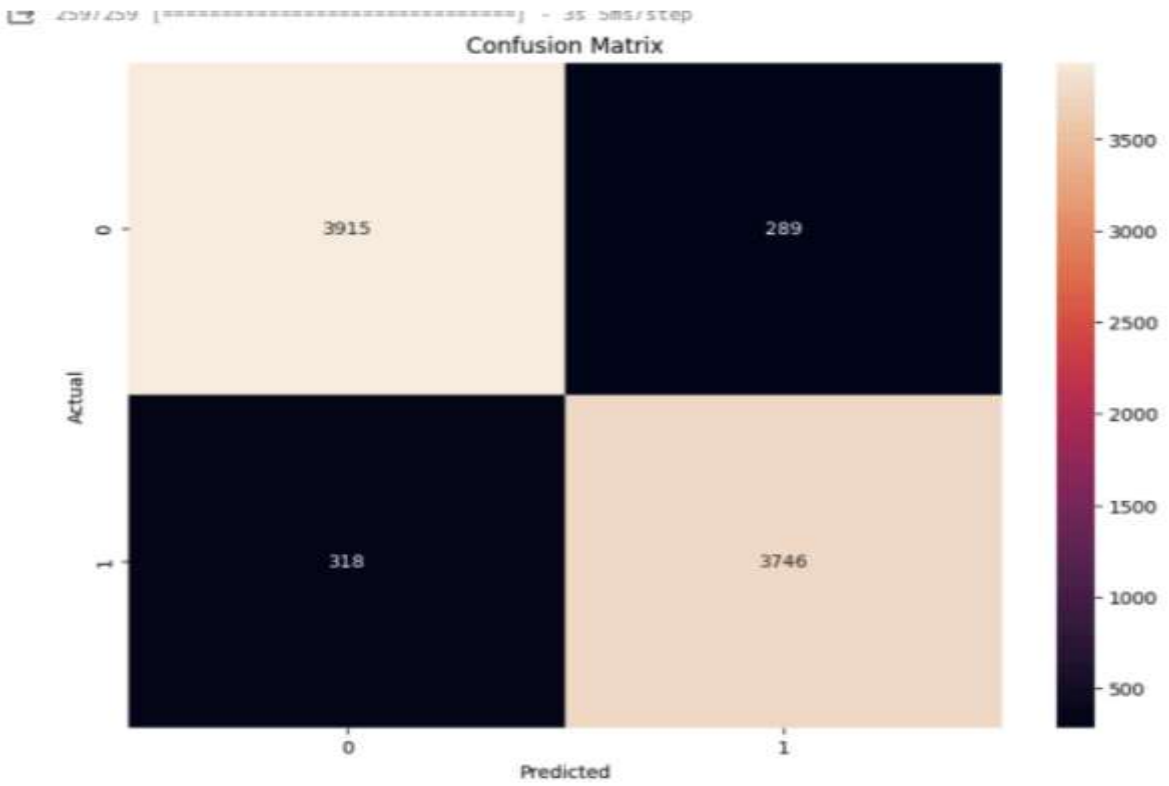
Accept of submissions in form of raw employees; perform analysis of financial to authenticate the users of the system.

Non Functional Requirements

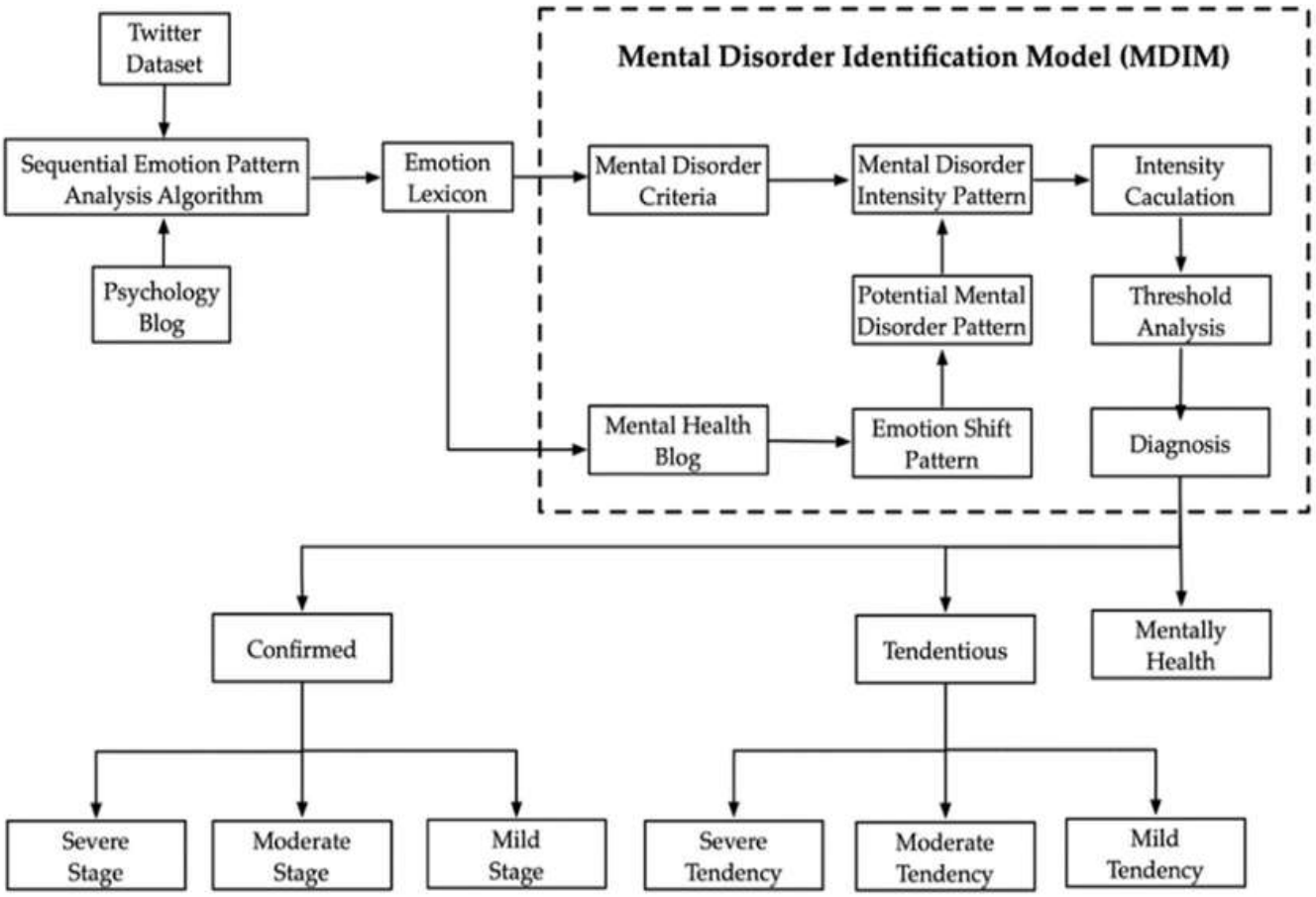
Non functional requirement include the following:

The system must verify the validate all user input ant user must be notified in case of errors detected in the database, the system should allow room for expansion.

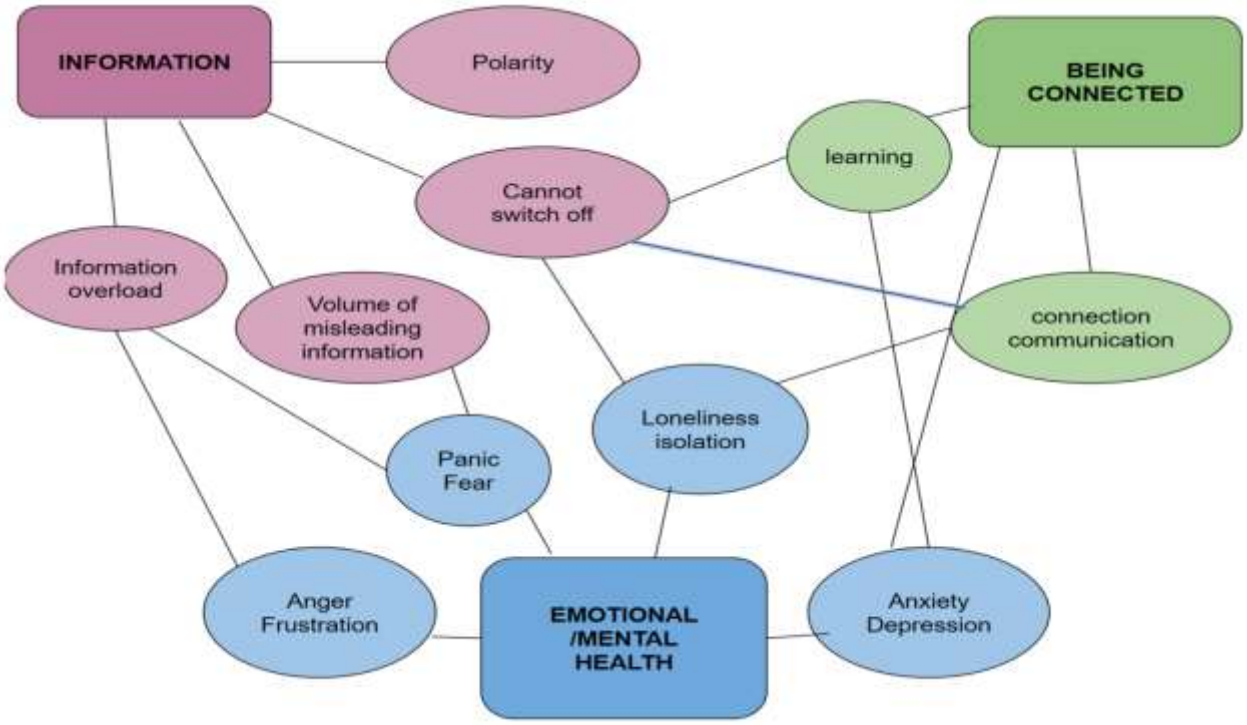
Software Design



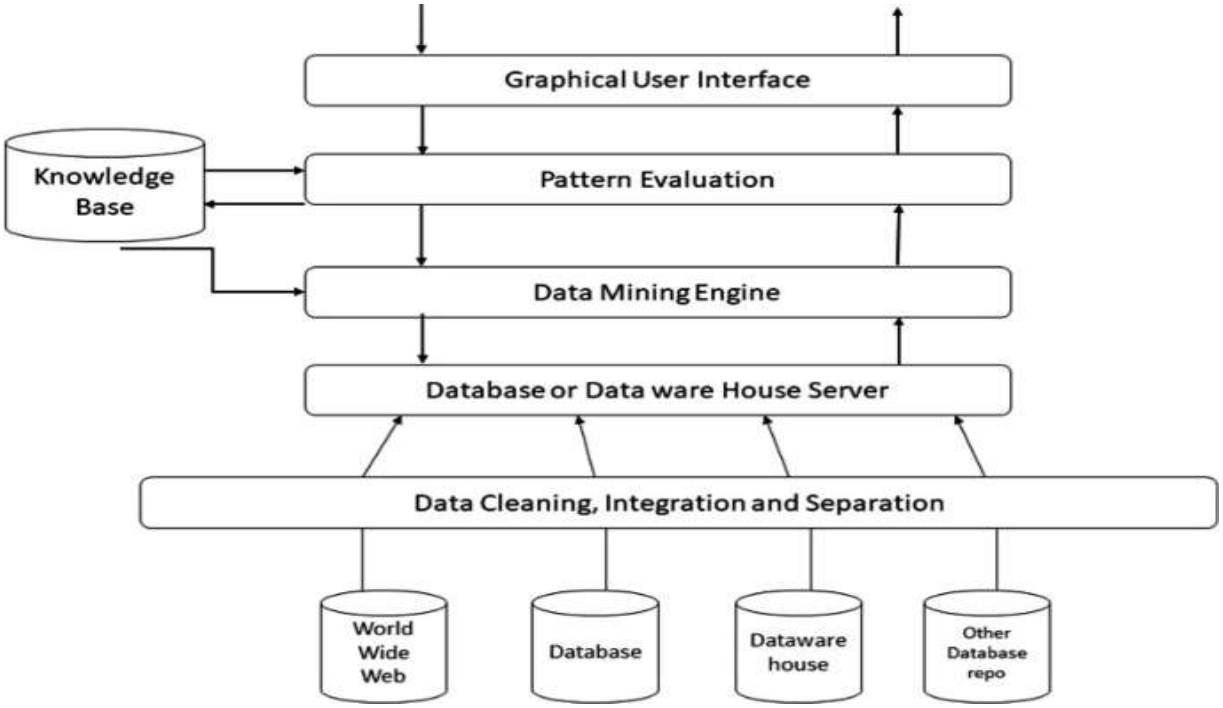
Data flow diagram



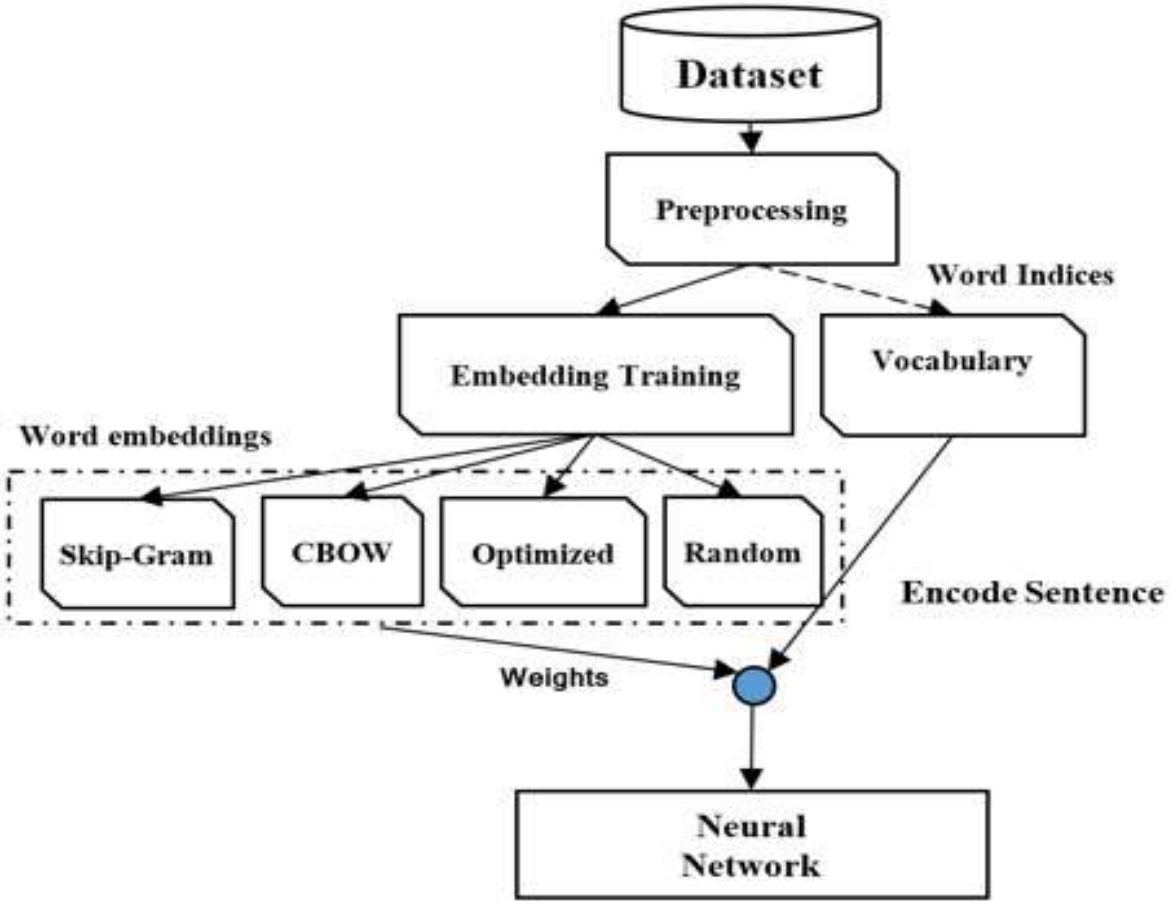
Structure diagram



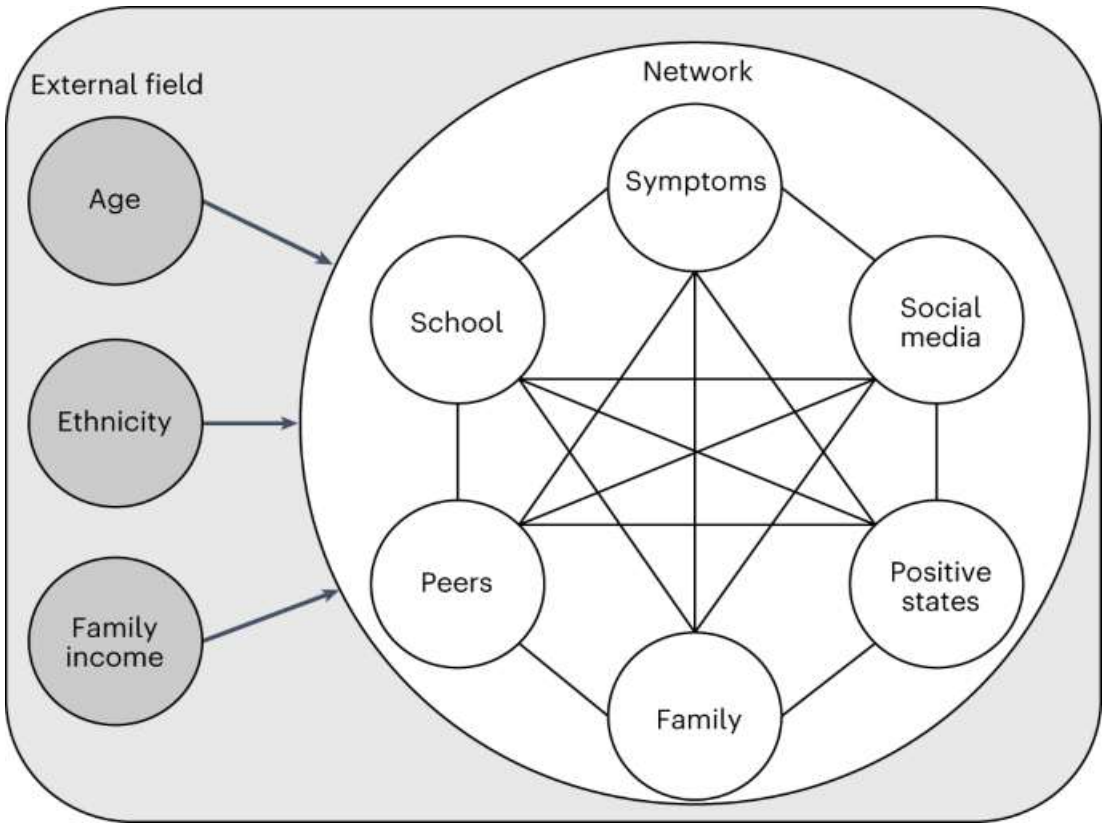
Class diagram



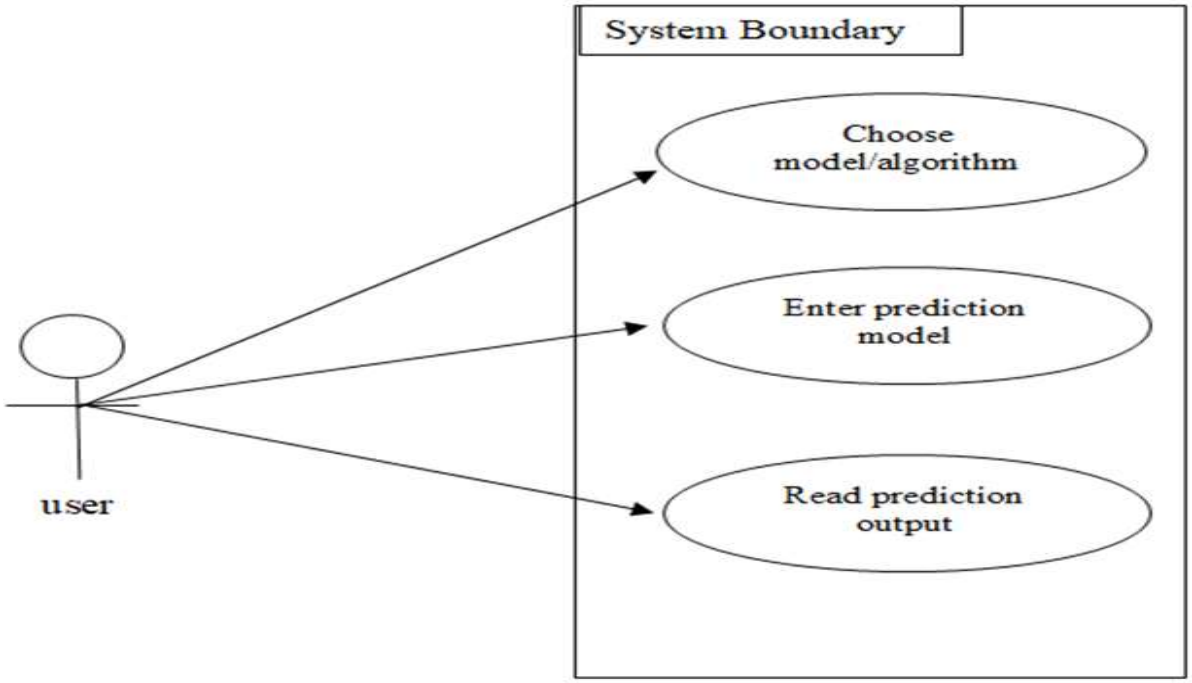
Architecture diagram



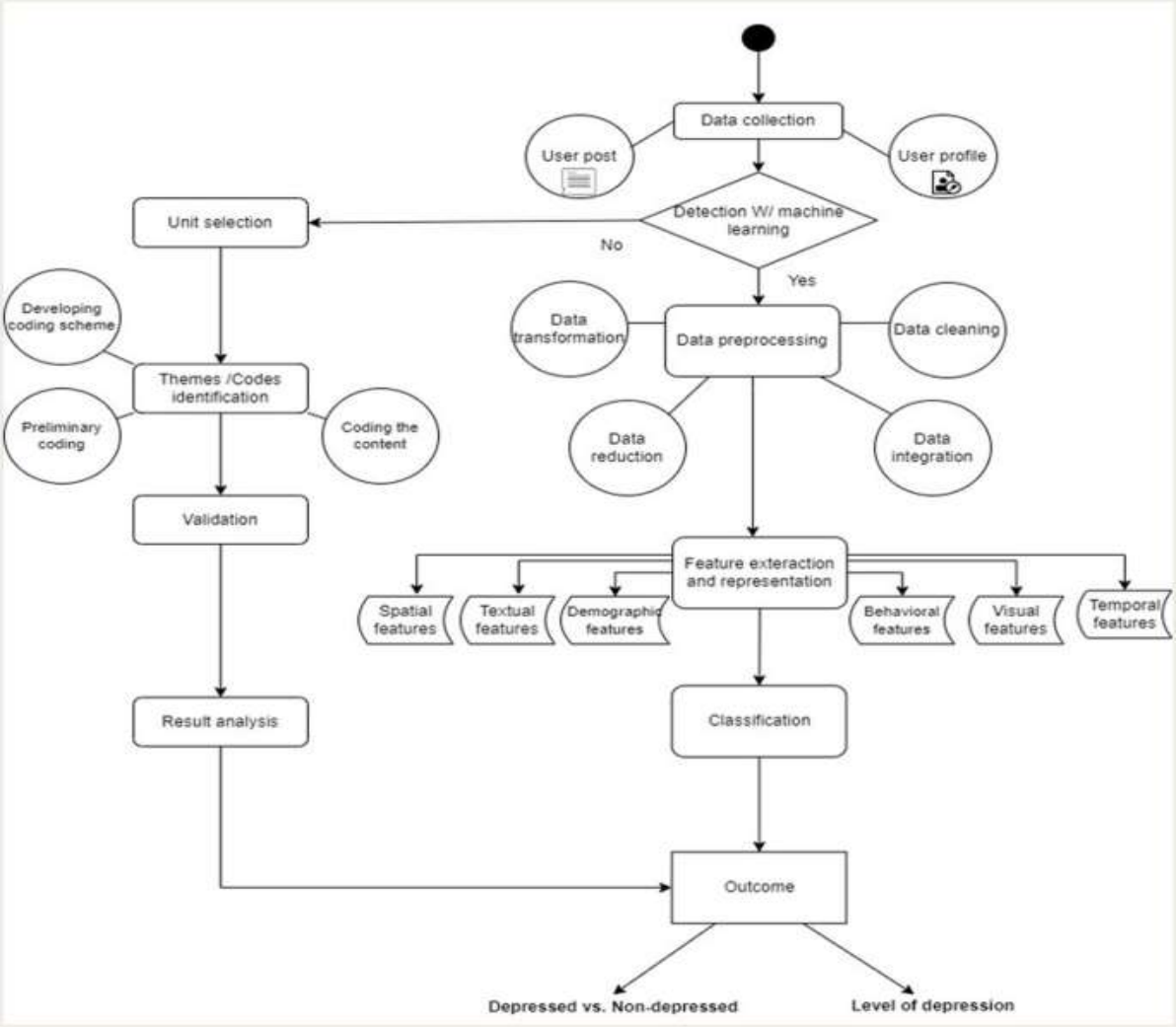
Behavioral diagram



Use case diagram



Sequence diagram



DATABASE DIAGRAM

Entity Relationship (E-R) Diagram

An entity relationship diagram (ERD) shows the relationships of entity sets stored in a database. An entity in this context is a component of data. In other words, ER diagrams illustrate the logical structure of databases. An entity relationship diagram is a means of visualizing how the information a system produces is related.

Entity:

Which are represented by rectangle? An entity is an object or concept that has its existence in the real world. It includes all those things about which data is collected. A weak entity is an entity that must defined by a foreign key relationship with another entity as it cannot be uniquely

identified by its own attributes alone.

Attributes:

Which are represented by ovals? A key attribute is the unique, distinguishing characteristic of the entity. For example, an employee's social security number might be the employee's key attribute.

An Entity Set:

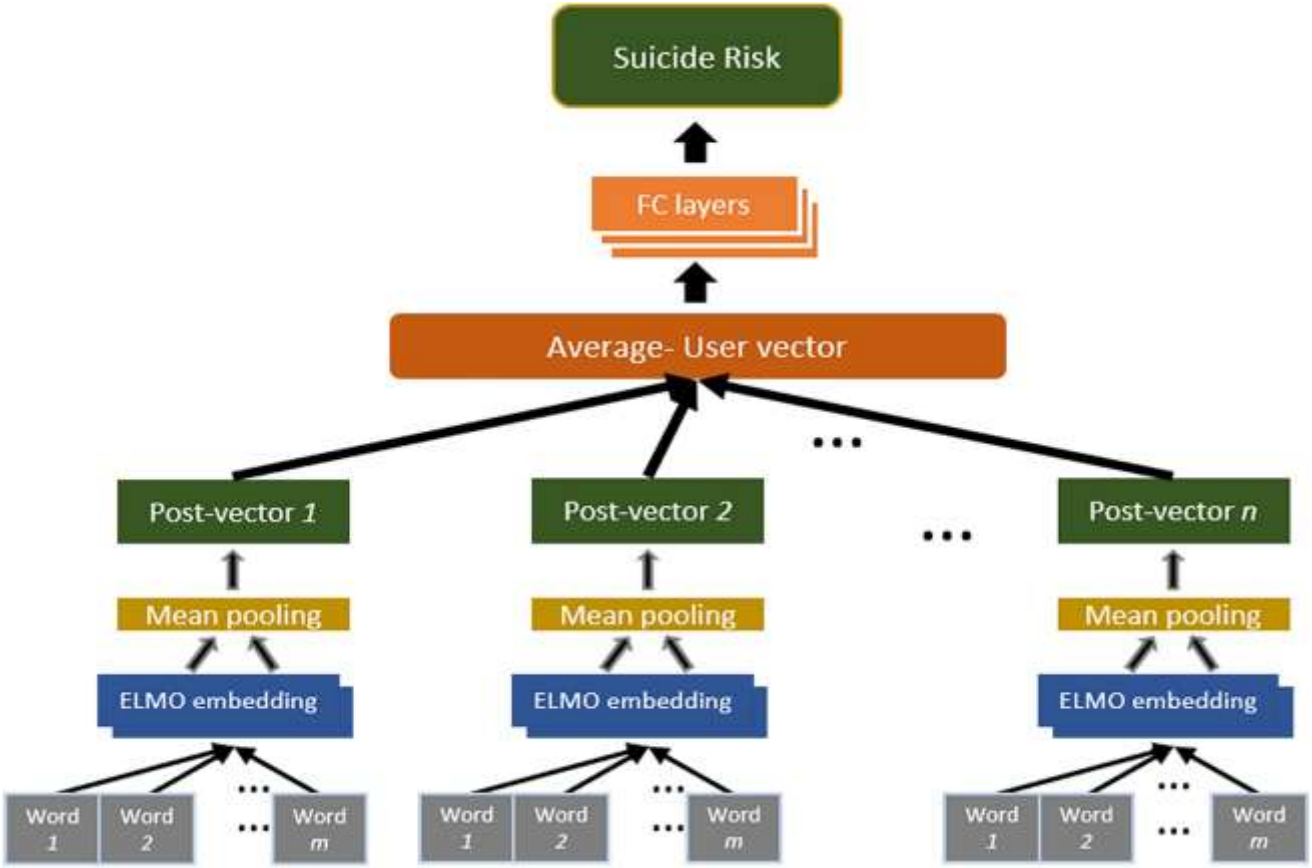
It is a set of entities of the same type that share the same properties, or attributes.

Process

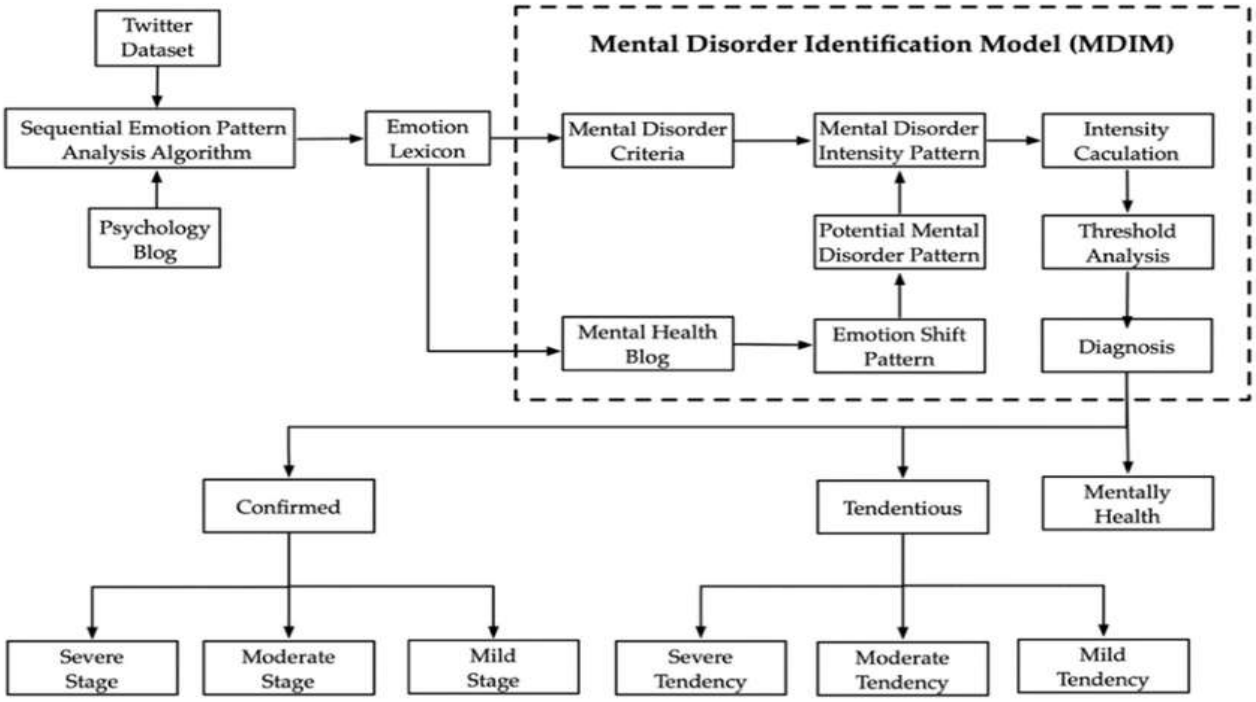
A process shows a transformation or manipulation of data flows within the system.

Actions:

Which are represented by diamond shapes, show how two entities share information in the database.



DFD


Twitter Dataset
Sequential Emotion Pattern Analysis Algorithm
Psychology Blog
Emotion Lexicon
Mental Disorder Identification Model (MDIM)
Mental Disorder Criteria
Mental Disorder Intensity Pattern
Intensity Caculation
Potential Mental Disorder Pattern
Threshold Analysis
Mental Health Blog
Emotion Shift Pattern
Diagnosis
Confirmed
Tendentious
Mentally Health
Severe Stage
Moderate Stage
Mild Stage
Severe Tendency
Moderate Tendency
Mild Tendency

CHAPTER – 3

CODE

Home.js

```
import React from 'react';
import { features } from '../data/dummyData';
import { useNavigate } from 'react-router-dom';

// Define types for our feature data
// eslint-disable-next-line @typescript-eslint/no-unused-vars
interface Feature {
  title: string;
  description: string;
  icon: string;
}

// EnhancedFeature is a separate interface that doesn't extend Feature
interface EnhancedFeature {
  title: string;
  description: string;
  icon: React.ReactNode;
  action: () => void;
}

// For social media platform inputs
interface PlatformUsage {
  platform: string;
  hoursPerDay: number;
  color: string;
}
```

```
// Try-catch for Material UI
let Container: any;
let Typography: any;
let Box: any;
let Grid: any;
let Paper: any;
let Button: any;
let TextField: any;
let Card: any;
let CardContent: any;
let CardMedia: any;
let CardActions: any;
let Divider: any;
let Fade: any;
let Zoom: any;
let Grow: any;
let Slide: any;
let Stack: any;
let Tooltip: any;
let useMediaQuery: any;
let useTheme: any;
let AssessmentIcon: any;
let PsychologyIcon: any;
let TimelineIcon: any;
let ArrowForwardIcon: any;
let SmartphoneIcon: any;
let GroupIcon: any;
let TrendingUpIcon: any;
let WarningIcon: any;
```

```
let CheckCircleIcon: any;
let Slider: any;
let CircularProgress: any;

// For React Hooks, declare variables first
let ReactHooks: {
  useState: typeof React.useState;
  useMemo: typeof React.useMemo;
  useEffect: typeof React.useEffect;
};

try {
  // Material-UI components
  const mui = require('@mui/material');
  Container = mui.Container;
  Typography = mui.Typography;
  Box = mui.Box;
  Grid = mui.Grid;
  Paper = mui.Paper;
  Button = mui.Button;
  TextField = mui.TextField;
  Card = mui.Card;
  CardContent = mui.CardContent;
  CardMedia = mui.CardMedia;
  CardActions = mui.CardActions;
  Divider = mui.Divider;
  Fade = mui.Fade;
  Zoom = mui.Zoom;
  Grow = mui.Grow;
  Slide = mui.Slide;
```

```
  Stack = mui.Stack;
  Tooltip = mui.Tooltip;
  useMediaQuery = mui.useMediaQuery;
  useTheme = mui.useTheme;
  Slider = mui.Slider;
  CircularProgress = mui.CircularProgress;

  // Material icons
  AssessmentIcon = require('@mui/icons-material/Assessment').default;
  PsychologyIcon = require('@mui/icons-material/Psychology').default;
  TimelineIcon = require('@mui/icons-material/Timeline').default;
  ArrowForwardIcon = require('@mui/icons-
material/ArrowForward').default;
  SmartphoneIcon = require('@mui/icons-material/Smartphone').default;
  GroupIcon = require('@mui/icons-material/Group').default;
  TrendingUpIcon = require('@mui/icons-material/TrendingUp').default;
  WarningIcon = require('@mui/icons-material/Warning').default;
  CheckCircleIcon = require('@mui/icons-material/CheckCircle').default;

  // Set up React hooks
  ReactHooks = {
    useState: React.useState,
    useMemo: React.useMemo,
    useEffect: React.useEffect
  };
} catch (error) {
  console.error("Error loading Material-UI dependencies:", error);
  // Fallback hooks
  ReactHooks = {
    useState: React.useState,
```

```
    useMemo: React.useMemo,
    useEffect: React.useEffect
  };
}

// Create a safe navigation function that doesn't use hooks at all
// Using window.location instead of hooks (no ESLint errors)
const safeNavigate = (path: string) => {
  try {
    // Use direct DOM API instead of React hooks - no rules of hooks issues
    window.location.href = path.startsWith('/') ? path : '/' + path;
  } catch (error) {
    console.error("Navigation failed:", error);
  }
};

// Dummy navigator for when the hook is not available
const dummyNavigator = (path: string) => {
  console.warn("Using dummy navigate function. React Router may not be
available.");
  safeNavigate(path);
};

// Custom hook with proper "use" prefix - this is critical for ESLint rules
const useNavigation = () => {
  // Get the navigate function from the hook unconditionally
  const navigateHook = useNavigate();

  // Return a function that either uses the hook result or falls back to the
dummy function
```

```
  return (path: string) => {
    if (navigateHook) {
      navigateHook(path);
    } else {
      dummyNavigator(path); // Fallback to a dummy function if `useNavigate` is not available
    }
  };
};

const Home: React.FC = () => {
  // Use our custom hook - this is now a proper hook call
  const navigate = useNavigation();

  const theme = useTheme(); // useTheme is a hook, so just call it directly.
  const breakpointSm = theme?.breakpoints?.down('sm') || '(max-width: 600px)';
  const breakpointMd = theme?.breakpoints?.down('md') || '(max-width: 900px)';
  const isMobile = useMediaQuery(breakpointSm); // Call useMediaQuery directly with breakpointSm.
  const isTablet = useMediaQuery(breakpointMd); // Call useMediaQuery directly with breakpointMd.




  // State for the form fields
  const [name, setName] = ReactHooks.useState('');
  const [age, setAge] = ReactHooks.useState<number | ''>('');
```

```
  const [dailyUsage, setDailyUsage] = ReactHooks.useState<number |
">(");
  const [isSubmitted, setIsSubmitted] = ReactHooks.useState(false);
  const [formComplete, setFormComplete] = ReactHooks.useState(false);
  const [visible, setVisible] = ReactHooks.useState(false);
  const [error, setError] = ReactHooks.useState<string | null>(null);
  const [activeSection, setActiveSection] = ReactHooks.useState<string |
null>(null);

  // State for platform usage
  const [platformUsage, setPlatformUsage] =
ReactHooks.useState<PlatformUsage[]>([
    { platform: 'Instagram', hoursPerDay: 0, color: '#E1306C' },
    { platform: 'Facebook', hoursPerDay: 0, color: '#4267B2' },
    { platform: 'TikTok', hoursPerDay: 0, color: '#000000' },
    { platform: 'Twitter', hoursPerDay: 0, color: '#1DA1F2' },
    { platform: 'Others', hoursPerDay: 0, color: '#8884d8' }
  ]);

  // Effect for animation
  ReactHooks.useEffect(() => {
    // Trigger fade-in animation after component mounts
    const timer = setTimeout(() => {
      setVisible(true);
    }, 100);
    return () => clearTimeout(timer);
  }, []);

  // Check if form is complete
  ReactHooks.useEffect(() => {
```

```
    if (name && age !== '' && dailyUsage !== '') {
      setFormComplete(true);
    } else {
      setFormComplete(false);
    }
  }, [name, age, dailyUsage]);

  // Map icon names to components
  const getIcon = (iconName: string): React.ReactNode => {
    switch (iconName) {
      case 'AssessmentIcon':
        return AssessmentIcon ? <AssessmentIcon sx={{ fontSize: 40 }} /> :
null;
      case 'PsychologyIcon':
        return PsychologyIcon ? <PsychologyIcon sx={{ fontSize: 40 }} /> :
null;
      case 'TimelineIcon':
        return TimelineIcon ? <TimelineIcon sx={{ fontSize: 40 }} /> : null;
      default:
        return null;
    }
  };

  // Handle Get Started button click
  const handleGetStarted = () => {
    if (!name || !age || !dailyUsage) {
      setError('Please fill in all required fields');
      return;
    }
```

```
    const userData = {
      name,
      age: Number(age),
      dailyUsage: Number(dailyUsage),
      platformUsage,
      timestamp: new Date().toISOString()
    };

    localStorage.setItem('userSocialMediaData', JSON.stringify(userData));
    navigate('/analysis');
  };

  // Enhanced features with navigation - use ReactHooks.useMemo to
avoid reference issues
  const enhancedFeatures: EnhancedFeature[] = ReactHooks.useMemo(()
=> features.map(feature => ({
    title: feature.title,
    description: feature.description,
    icon: getIcon(feature.icon),
    action: handleGetStarted,
  })), []);  // Empty dependency array since handleGetStarted uses the
navigate from closure

  // Handle platform usage change
  const handlePlatformChange = (index: number, value: number) => {
    const updated = [...platformUsage];
    updated[index].hoursPerDay = value;
    setPlatformUsage(updated);

    // Update total daily usage
```

```
    const total = updated.reduce((sum, platform) => sum +
platform.hoursPerDay, 0);
    setDailyUsage(total);
  };

  // Handle form submission
  const handleSubmit = (e: React.FormEvent<HTMLFormElement>) => {
    e.preventDefault();

    if (name && age !== '' && dailyUsage !== '') {
      // Calculate total hours to verify
      const totalHours = platformUsage.reduce((sum, platform) => sum +
platform.hoursPerDay, 0);

      // Save to local storage
      const userData = {
        name,
        age: Number(age),
        dailyUsage: totalHours, // Use calculated total
        platformUsage: platformUsage,
        timestamp: new Date().toISOString()
      };

      localStorage.setItem('userSocialMediaData',
JSON.stringify(userData));
      setIsSubmitted(true);

      // Navigate to analysis after short delay for better UX
      setTimeout(() => {
        handleGetStarted();
```

```
    }, 1000);
  }
};

// If dependencies failed to load
if (!Container || !Typography) {
  return (
    <div style={{ padding: '20px', textAlign: 'center' }}>
      <h2>Social Network Mental Disorder Detection</h2>
      <p>Dependencies are still loading. Please make sure you've installed all required packages.</p>
    </div>
  );
}

return (
  <Container maxWidth="lg" sx={{ mt: { xs: 2, md: 4 }, mb: { xs: 4, md: 8 } }}>
    <Fade in={visible} timeout={1000}>
      <Box>
        {/* Enhanced Hero Section with gradient background and responsive design */}
        <Box
          sx={{
            textAlign: 'center',
            mb: { xs: 4, md: 8 },
            p: { xs: 3, md: 6 },
            borderRadius: 4,
            background: 'linear-gradient(135deg, #2196F3 0%, #21CBF3 50%, #4A66E3 100%)',
            color: 'white',
```

```
    boxShadow: '0 10px 40px -12px rgba(0,117,255,0.35)',
    position: 'relative',
    overflow: 'hidden'
  }}
>
  {/* Animated background circles */}
  <Box sx={{
    position: 'absolute',
    width: '300px',
    height: '300px',
    borderRadius: '50%',
    background: 'rgba(255,255,255,0.05)',
    top: '-120px',
    right: '-100px',
    animation: 'move 20s infinite alternate'
  }} />
  <Box sx={{
    position: 'absolute',
    width: '200px',
    height: '200px',
    borderRadius: '50%',
    background: 'rgba(255,255,255,0.05)',
    bottom: '-80px',
    left: '-60px',
    animation: 'move2 15s infinite alternate'
  }} />

  <Box sx={{ position: 'relative', zIndex: 1 }}>
    <Slide direction="down" in={visible} timeout={1000}>
      <Typography
```

```
            variant={isMobile ? "h3" : "h2"}
            component="h1"
            gutterBottom
            fontWeight="bold"
            sx={{
              textShadow: '0 4px 12px rgba(0,0,0,0.15)',
              fontSize: { xs: '2rem', sm: '2.5rem', md: '3.2rem' }
            }}
          >
            Social Network Mental Disorder Detection
          </Typography>
        </Slide>

        <Slide direction="up" in={visible} timeout={1200}>
          <Typography
            variant={isMobile ? "body1" : "h6"}
            paragraph
            sx={{
              mb: 4,
              maxWidth: '800px',
              mx: 'auto',
              opacity: 0.95,
              fontSize: { xs: '1rem', sm: '1.1rem', md: '1.25rem' }
            }}
          >
            Understand and manage your social media usage patterns for better mental health and wellbeing
          </Typography>
        </Slide>
```

```
            <Zoom in={visible} timeout={1400}>
              <Button
                variant="contained"
                color="secondary"
                size="large"
                onClick={() =>
document.getElementById('analyze')?.scrollIntoView({ behavior: 'smooth'
})}
                endIcon={<ArrowForwardIcon />}
                sx={{
                  mt: { xs: 1, md: 3 },
                  px: { xs: 3, md: 5 },
                  py: { xs: 1, md: 1.5 },
                  borderRadius: 28,
                  fontWeight: 'bold',
                  fontSize: { xs: '0.9rem', md: '1rem' },
                  background: 'white',
                  color: '#2196F3',
                  boxShadow: '0 6px 20px rgba(0,0,0,0.15)',
                  textTransform: 'none',
                  '&:hover': {
                    background: 'rgba(255,255,255,0.9)',
                    transform: 'translateY(-3px)',
                    boxShadow: '0 10px 25px rgba(0,0,0,0.2)',
                  },
                  transition: 'all 0.3s ease'
                }}
              >
                Get Started
              </Button>
```

```
</Zoom>

{/* Key Stats */}
<Grid
  container
  spacing={2}
  sx={{
    mt: { xs: 4, md: 6 },
    justifyContent: 'center',
    px: { xs: 0, md: 6 }
  }}
>
  {[
    {
      title: '50%',
      desc: 'of teens feel addicted',
      icon: SmartphoneIcon
    },
    {
      title: '38%',
      desc: 'report social anxiety',
      icon: GroupIcon
    },
    {
      title: '5+ hrs',
      desc: 'average daily usage',
      icon: TimelineIcon
    }
  ].map((stat, index) => (
    <Grid item xs={12} sm={4} key={index}>
```

```
                <Grow in={visible} timeout={1000 + (index * 300)}>
                  <Paper
                    elevation={0}
                    sx={{
                      py: 2,
                      px: 3,
                      borderRadius: 4,
                      bgcolor: 'rgba(255,255,255,0.15)',
                      backdropFilter: 'blur(5px)',
                      transition: 'all 0.3s ease',
                      '&:hover': {
                        bgcolor: 'rgba(255,255,255,0.25)',
                        transform: 'translateY(-5px)'
                      }
                    }}
                  >
                    <Box sx={{ display: 'flex', alignItems: 'center' }}>
                      {stat.icon && <stat.icon sx={{ fontSize: { xs: 30, md: 36 }, mr: 1, opacity: 0.9 }} />}
                      <Box>
                        <Typography variant="h5" component="div" fontWeight="bold" sx={{ lineHeight: 1.2 }}>
                          {stat.title}
                        </Typography>
                        <Typography variant="body2" sx={{ opacity: 0.9 }}>
                          {stat.desc}
                        </Typography>
                      </Box>
                    </Box>
                  </Paper>
```

```
            </Grow>
          </Grid>
        ))}
      </Grid>
    </Box>
  </Box>

  {/* Main content with enhanced visuals and animations */}
  <Grid container spacing={4}>
    {/* Features Section - Improved with animations and hover effects
*/}
    <Grid item xs={12} sx={{ mb: 4 }}>
      <Fade in={visible} timeout={1600}>
        <Box>
          <Typography
            variant="h4"
            component="h2"
            gutterBottom
            textAlign="center"
            fontWeight="bold"
            color="primary"
            sx={{ mb: 1 }}
          >
            Understanding Social Media Disorder
          </Typography>
          <Typography
            variant="body1"
            paragraph
            textAlign="center"
            color="text.secondary"
```

```
            sx={{ mb: 5, maxWidth: 800, mx: 'auto' }}
          >
            Learn about the signs, impacts, and ways to manage social media use for better mental health
          </Typography>

          <Grid container spacing={3}>
            {enhancedFeatures.map((feature, index) => (
              <Grid item xs={12} sm={6} md={4} key={index}>
                <Grow in={visible} timeout={1800 + (index * 200)}>
                  <Card
                    sx={{
                      height: '100%',
                      borderRadius: 3,
                      boxShadow: '0 8px 40px -12px rgba(0,0,0,0.1)',
                      transition: 'all 0.3s ease',
                      '&:hover': {
                        transform: 'translateY(-8px)',
                        boxShadow: '0 12px 45px -10px rgba(33, 150, 243, 0.3)'
                      }
                    }}
                  >
                    <CardContent sx={{ p: 3, height: '100%', display: 'flex', flexDirection: 'column' }}>
                      <Box
                        sx={{
                          mb: 2,
                          p: 1.5,
                          borderRadius: 2,
```

```
                    display: 'inline-flex',
                    background: 'linear-gradient(45deg, #2196F3 30%,
#21CBF3 90%)',
                    color: 'white',
                    boxShadow: '0 4px 20px -12px rgba(0,0,0,0.3)'
                  }}
                >
                  {feature.icon}
                </Box>
                <Typography variant="h6" component="h3"
gutterBottom fontWeight="bold">
                  {feature.title}
                </Typography>
                <Typography variant="body2" color="text.secondary"
sx={{ mb: 2, flexGrow: 1 }}>
                  {feature.description}
                </Typography>
                <Button
                  variant="outlined"
                  color="primary"
                  size="small"
                  onClick={feature.action}
                  sx={{
                    alignSelf: 'flex-start',
                    borderRadius: 28,
                    mt: 'auto',
                    textTransform: 'none',
                    '&:hover': {
                      background: 'rgba(33, 150, 243, 0.05)'
                    }
```

```
                }}
              >
                Learn more
              </Button>
            </CardContent>
          </Card>
        </Grow>
      </Grid>
    ))}
  </Grid>
 </Box>
</Fade>
</Grid>

{/* Analysis Section with improved form */}
<Grid item xs={12}>
 <Box id="analyze" sx={{ scrollMarginTop: '1rem' }}>
  <Fade in={visible} timeout={2000}>
   <Paper
    elevation={0}
    sx={{
     p: { xs: 3, md: 5 },
     borderRadius: 4,
     background: 'linear-gradient(to right, #f5f7fa, #e8edf5)',
     boxShadow: '0 10px 40px -12px rgba(0,0,0,0.12)'
    }}
   >
    <Grid container spacing={4}>
     <Grid item xs={12} md={6}>
      <Typography
```

```
                variant="h4"
                component="h2"
                gutterBottom
                fontWeight="bold"
                color="primary"
                sx={{ mb: 1 }}
              >
                Analyze Your Social Media Usage
              </Typography>
              <Typography variant="body1" paragraph
color="text.secondary" sx={{ mb: 3 }}>
                Fill in the details below to receive a personalized analysis
of your social media habits and potential risks
              </Typography>

              <Stack spacing={2} sx={{ mb: 3 }}>
                {[
                  { icon: CheckCircleIcon, text: 'Personalized risk
assessment' },
                  { icon: CheckCircleIcon, text: 'Platform-specific insights'
},
                  { icon: CheckCircleIcon, text: 'Actionable
recommendations' }
                ].map((item, index) => (
                  <Box key={index} sx={{ display: 'flex', alignItems:
'center' }}>
                    <item.icon color="primary" sx={{ mr: 1, fontSize: 20
}} />
                    <Typography
variant="body1">{item.text}</Typography>
                  </Box>
```

```
          ))}
        </Stack>

        <Box
          sx={{
            p: 2,
            borderRadius: 2,
            bgcolor: 'rgba(255, 152, 0, 0.1)',
            display: 'flex',
            alignItems: 'flex-start',
            mb: 2
          }}
        >
          <WarningIcon color="warning" sx={{ mr: 1, mt: 0.3 }} />
          <Typography variant="body2" color="text.secondary">
            Your data is stored locally and is not shared with any
third parties. We respect your privacy.
          </Typography>
        </Box>
      </Grid>

      <Grid item xs={12} md={6}>
        {!isSubmitted ? (
          <Box
            component="form"
            onSubmit={handleSubmit}
            sx={{
              p: { xs: 2, md: 3 },
              bgcolor: 'white',
              borderRadius: 3,
```

```
            boxShadow: '0 8px 30px -12px rgba(0,0,0,0.15)'
          }}
        >
          <Stack spacing={3}>
            <TextField
              fullWidth
              label="Your Name"
              value={name}
              onChange={(e) => setName(e.target.value)}
              required
              variant="outlined"
              error={!!error && !name}
              helperText={error && !name ? error : ''}
              InputProps={{
                sx: { borderRadius: 2 }
              }}
            />

            <Grid container spacing={2}>
              <Grid item xs={12} sm={6}>
                <TextField
                  fullWidth
                  label="Age"
                  type="number"
                  value={age}
                  onChange={(e) => setAge(e.target.value ?
Number(e.target.value) : '')}
                  required
                  variant="outlined"
                  error={!!error && !age}
```

```
                helperText={error && !age ? error : ''}
                InputProps={{
                  sx: { borderRadius: 2 }
                }}
              />
            </Grid>
            <Grid item xs={12} sm={6}>
              <TextField
                fullWidth
                label="Daily Social Media Usage (hours)"
                type="number"
                value={dailyUsage}
                onChange={(e) => setDailyUsage(e.target.value ? Number(e.target.value) : '')}
                required
                variant="outlined"
                error={!!error && !dailyUsage}
                helperText={error && !dailyUsage ? error : ''}
                InputProps={{
                  sx: { borderRadius: 2 }
                }}
              />
            </Grid>
          </Grid>

          <Typography variant="subtitle2" gutterBottom color="text.secondary">
            Platform Breakdown (Optional)
          </Typography>
```

```
                    <Box sx={{ px: 1 }}>
                      {platformUsage.map((platform, index) => (
                        <Box key={index} sx={{ mb: 2 }}>
                          <Box sx={{ display: 'flex', justifyContent: 'space-
between', mb: 0.5 }}>
                            <Typography
variant="body2">{platform.platform}</Typography>
                            <Typography variant="body2"
color="text.secondary">
                              {platform.hoursPerDay} hours
                            </Typography>
                          </Box>
                          <Slider
                            value={platform.hoursPerDay}
                            onChange={(_, value) =>
handlePlatformChange(index, value as number)}
                            min={0}
                            max={12}
                            step={0.5}
                            sx={{
                              '& .MuiSlider-thumb': {
                                backgroundColor: platform.color,
                              },
                              '& .MuiSlider-track': {
                                backgroundColor: platform.color,
                              },
                            }}
                          />
                        </Box>
                      ))}
                    </Box>
```

```
                <Button
                  type="submit"
                  variant="contained"
                  size="large"
                  fullWidth
                  disabled={!formComplete}
                  sx={{
                    mt: 2,
                    py: 1.5,
                    borderRadius: 28,
                    fontWeight: 'medium',
                    boxShadow: '0 6px 20px rgba(33, 150, 243, 0.3)',
                    background: 'linear-gradient(45deg, #2196F3 30%,
#21CBF3 90%)',
                    textTransform: 'none',
                    fontSize: '1rem',
                    transition: 'all 0.3s ease',
                    '&:hover': {
                      boxShadow: '0 8px 25px rgba(33, 150, 243, 0.4)',
                      transform: 'translateY(-3px)'
                    }
                  }}
                >
                  Analyze My Usage
                </Button>
              </Stack>
            </Box>
          ) : (
            <Box
```

```
                    sx={{
                      display: 'flex',
                      flexDirection: 'column',
                      alignItems: 'center',
                      justifyContent: 'center',
                      bgcolor: 'white',
                      p: 4,
                      borderRadius: 3,
                      height: '100%',
                      boxShadow: '0 8px 30px -12px rgba(0,0,0,0.15)'
                    }}
                  >
                    <CircularProgress size={50} thickness={4} sx={{ mb: 3
}} />
                    <Typography variant="h6" gutterBottom
fontWeight="medium">
                      Analyzing Your Data
                    </Typography>
                    <Typography variant="body2" color="text.secondary"
textAlign="center">
                      Please wait while we process your information and
generate insights...
                    </Typography>
                  </Box>
                )}
              </Grid>
            </Grid>
          </Paper>
        </Fade>
      </Box>
    </Grid>
```

```
        </Grid>

        {/* Footer */}
        <Box sx={{ mt: 6, py: 3, textAlign: 'center' }}>
          <Divider sx={{ mb: 3 }} />
          <Typography variant="body2" color="text.secondary">
            © {new Date().getFullYear()} Social Network Mental Disorder Detection | All rights reserved
          </Typography>
        </Box>
      </Box>
    </Fade>

    <style>{`
      @keyframes move {
        0% { transform: translateY(0) rotate(0deg); }
        100% { transform: translateY(30px) rotate(20deg); }
      }
      @keyframes move2 {
        0% { transform: translateY(0) rotate(0deg); }
        100% { transform: translateY(-20px) rotate(-15deg); }
      }
    `}</style>
  </Container>
 );
};

export default Home;
```

About.js

```
import React from 'react';
import { useNavigate } from 'react-router-dom';
import { disorderSymptoms, improvementStrategies, positiveImpacts }
from '../data/dummyData';

// Dynamic imports with try-catch
let Container: any;
let Typography: any;
let Box: any;
let Grid: any;
let Paper: any;
let Card: any;
let CardContent: any;
let Divider: any;
let Accordion: any;
let AccordionSummary: any;
let AccordionDetails: any;
let Avatar: any;
let Chip: any;
let Link: any;
let Button: any;
let Fade: any;
let ExpandMoreIcon: any;
let FavoriteIcon: any;
let CheckCircleIcon: any;
let PersonIcon: any;
let ArticleIcon: any;
let SchoolIcon: any;
let VideoLibraryIcon: any;
```

```
// For React hooks
let ReactHooks: {
  useState: typeof React.useState;
  useEffect: typeof React.useEffect;
};

try {
  // Material-UI components
  const mui = require('@mui/material');
  Container = mui.Container;
  Typography = mui.Typography;
  Box = mui.Box;
  Grid = mui.Grid;
  Paper = mui.Paper;
  Card = mui.Card;
  CardContent = mui.CardContent;
  Divider = mui.Divider;
  Accordion = mui.Accordion;
  AccordionSummary = mui.AccordionSummary;
  AccordionDetails = mui.AccordionDetails;
  Avatar = mui.Avatar;
  Chip = mui.Chip;
  Link = mui.Link;
  Button = mui.Button;
  Fade = mui.Fade;

  // Material icons
  ExpandMoreIcon = require('@mui/icons-material/ExpandMore').default;
  FavoriteIcon = require('@mui/icons-material/Favorite').default;
```

```
  CheckCircleIcon = require('@mui/icons-material/CheckCircle').default;
  PersonIcon = require('@mui/icons-material/Person').default;
  ArticleIcon = require('@mui/icons-material/Article').default;
  SchoolIcon = require('@mui/icons-material/School').default;
  VideoLibraryIcon = require('@mui/icons-
material/VideoLibrary').default;

  // Set up React hooks
  ReactHooks = {
    useState: React.useState,
    useEffect: React.useEffect
  };
} catch (error) {
  console.error("Error loading Material-UI dependencies:", error);
  ReactHooks = {
    useState: React.useState,
    useEffect: React.useEffect
  };
}

// Resources about social media disorder
const resources = [
  {
    title: "Understanding Social Media Addiction",
    type: "Article",
    icon: ArticleIcon,
    author: "Mayo Clinic",
    link: "https://www.mayoclinic.org/healthy-lifestyle/tween-and-teen-
health/in-depth/teens-and-social-media-use/art-20474437",
    description: "Comprehensive guide to understanding social media
```

addiction, symptoms, and treatment options"
  },
  {
    title: "Digital Wellbeing and Mental Health",
    type: "Research",
    icon: SchoolIcon,
    author: "Journal of Behavioral Addictions",
    link: "https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6901840/",
    description: "Scientific research on the relationship between social media use and mental health outcomes"
  },
  {
    title: "How to Break Social Media Addiction",
    type: "Video",
    icon: VideoLibraryIcon,
    author: "TEDx Talks",
    link: "https://www.youtube.com/watch?v=PJTonrzXTJs",
    description: "Expert tips and practical strategies to overcome social media addiction"
  },
  {
    title: "Mindful Social Media Usage",
    type: "Guide",
    icon: ArticleIcon,
    author: "Center for Humane Technology",
    link: "https://www.humanetech.com/take-control",
    description: "Tools and techniques for more mindful and intentional use of social media platforms"
  },
  {

```
    title: "Helping Teenagers with Social Media",
    type: "Resource",
    icon: PersonIcon,
    author: "Child Mind Institute",
    link: "https://childmind.org/article/social-media-and-self-doubt/",
    description: "Guide for parents and educators to help teenagers develop healthy social media habits"
  }
];

// Team member profiles
const teamMembers = [
  {
    name: "Dr. Emma Chen",
    role: "Behavioral Psychologist",
    description: "Specializing in digital behavior and addiction patterns",
    avatar: "EC"
  },
  {
    name: "Michael Rodriguez",
    role: "Data Scientist",
    description: "Expert in behavioral data analysis and prediction models",
    avatar: "MR"
  },
  {
    name: "Sarah Johnson",
    role: "UX Designer",
    description: "Creating intuitive and accessible digital health applications",
    avatar: "SJ"
```

```
  },
  {
    name: "David Park",
    role: "Mental Health Counselor",
    description: "Specialized in technology addiction counseling",
    avatar: "DP"
  }
];

// Custom hook with proper "use" prefix
const useNavigation = () => {
  // Get the navigate function from the hook unconditionally
  const navigateHook = useNavigate();

  // Return a wrapped navigation function
  return (path: string) => {
    if (navigateHook) {
      navigateHook(path);
    } else {
      // Fallback to direct navigation
      window.location.href = path.startsWith('/') ? path : '/' + path;
    }
  };
};

const About: React.FC = () => {
  const navigate = useNavigation();
  const [visible, setVisible] = ReactHooks.useState(false);

  // Effect for animation
```

```
  ReactHooks.useEffect(() => {
    // Trigger fade-in animation after component mounts
    const timer = setTimeout(() => {
      setVisible(true);
    }, 100);
    return () => clearTimeout(timer);
  }, []);

  // If Material-UI failed to load
  if (!Container || !Typography) {
    return (
      <div style={{ padding: '20px', textAlign: 'center' }}>
        <h2>About Social Media Disorder</h2>
        <p>Dependencies are still loading. Please make sure you've installed
all required packages.</p>
        <button onClick={() => navigate('/')}>Back to Home</button>
      </div>
    );
  }

  return (
    <Container maxWidth="lg" sx={{ mt: 4, mb: 8 }}>
      <Fade in={visible} timeout={1000}>
        <Box>
          {/* Hero Section */}
          <Box sx={{
            textAlign: 'center',
            mb: 6,
            p: 5,
            borderRadius: 2,
```

```
          background: 'linear-gradient(45deg, #6a1b9a 30%, #9c27b0 90%)',
          color: 'white',
          boxShadow: '0 3px 5px 2px rgba(156, 39, 176, .3)'
        }}>
          <Typography variant="h3" component="h1" gutterBottom
fontWeight="bold">
            About the Social Media Disorder Detector
          </Typography>
          <Typography variant="h6" paragraph>
            Understanding, Detecting, and Addressing Unhealthy Social
Media Usage Patterns
          </Typography>
          <Button
            variant="contained"
            size="large"
            onClick={() => navigate('/')}
            sx={{
              mt: 2,
              px: 4,
              py: 1,
              borderRadius: 28,
              fontWeight: 'bold',
              background: 'white',
              color: '#9c27b0',
              '&:hover': {
                background: 'rgba(255,255,255,0.9)'
              }
            }}
          >
            Try the Detector
```

```
          </Button>
        </Box>

        {/* Main Content Grid */}
        <Grid container spacing={4}>
          {/* About the Project */}
          <Grid item xs={12} md={7}>
            <Card sx={{ borderRadius: 2, height: '100%', boxShadow: '0 8px
40px -12px rgba(0,0,0,0.2)' }}>
              <CardContent sx={{ p: 3 }}>
                <Typography variant="h5" component="h2"
fontWeight="bold" gutterBottom color="primary">
                  What is Social Media Disorder?
                </Typography>
                <Typography variant="body1" paragraph>
                  Social Media Disorder (SMD) refers to excessive and
compulsive use of social media platforms
                  that interferes with daily life functioning, relationships, and
mental well-being. It is characterized
                  by symptoms similar to those of other behavioral addictions,
such as preoccupation, tolerance, withdrawal,
                  and continued use despite negative consequences.
                </Typography>
                <Typography variant="body1" paragraph>
                  Our Social Media Disorder Detector is designed to help
individuals identify potentially problematic
                  patterns in their social media usage and provide personalized
recommendations for developing healthier
                  digital habits. Using evidence-based approaches from
psychology and behavioral science, we analyze
                  usage patterns and provide actionable steps for improvement.
```

```
            </Typography>

            <Divider sx={{ my: 3 }} />

            <Typography variant="h5" component="h2"
fontWeight="bold" gutterBottom color="primary">
              Our Approach
            </Typography>
            <Typography variant="body1" paragraph>
              The Social Media Disorder Detector is built on a three-pillar
approach:
            </Typography>

            <Grid container spacing={2} sx={{ mb: 2 }}>
              <Grid item xs={12} sm={4}>
                <Paper sx={{ p: 2, height: '100%', bgcolor: '#f5f5f5',
borderRadius: 2 }}>
                  <Typography variant="h6" fontWeight="medium"
gutterBottom align="center">
                    Assessment
                  </Typography>
                  <Typography variant="body2" align="center">
                    Using validated psychological measures to evaluate social
media usage patterns
                  </Typography>
                </Paper>
              </Grid>
              <Grid item xs={12} sm={4}>
                <Paper sx={{ p: 2, height: '100%', bgcolor: '#f5f5f5',
borderRadius: 2 }}>
                  <Typography variant="h6" fontWeight="medium"
```

```
gutterBottom align="center">
                    Analysis
                  </Typography>
                  <Typography variant="body2" align="center">
                    Data-driven risk assessment based on established research in digital behavior
                  </Typography>
                </Paper>
              </Grid>
              <Grid item xs={12} sm={4}>
                <Paper sx={{ p: 2, height: '100%', bgcolor: '#f5f5f5', borderRadius: 2 }}>
                  <Typography variant="h6" fontWeight="medium" gutterBottom align="center">
                    Action
                  </Typography>
                  <Typography variant="body2" align="center">
                    Personalized recommendations and strategies for healthier social media use
                  </Typography>
                </Paper>
              </Grid>
            </Grid>

            <Typography variant="body1">
              Our tool is for educational purposes only and does not replace professional medical or psychological advice.
              If you're concerned about your social media usage, please consult with a healthcare professional.
            </Typography>
          </CardContent>
```

```
          </Card>
        </Grid>

        {/* Key Symptoms */}
        <Grid item xs={12} md={5}>
          <Card sx={{ borderRadius: 2, boxShadow: '0 8px 40px -12px rgba(0,0,0,0.2)', mb: 4 }}>
            <CardContent sx={{ p: 3 }}>
              <Typography variant="h5" component="h2" fontWeight="bold" gutterBottom color="primary">
                Common Symptoms
              </Typography>
              <Typography variant="body2" paragraph color="text.secondary">
                According to research, these are the most common signs of social media disorder:
              </Typography>

              <Box component="ul" sx={{ pl: 2 }}>
                {disorderSymptoms.slice(0, 5).map(symptom => (
                  <Box component="li" key={symptom.id} sx={{ mb: 1.5 }}>
                    <Typography variant="body1" fontWeight="medium">
                      {symptom.name}
                    </Typography>
                    <Typography variant="body2" color="text.secondary">
                      {symptom.description}
                    </Typography>
                  </Box>
                ))}
              </Box>
```

```
            <Box sx={{ display: 'flex', justifyContent: 'center', mt: 2 }}>
              <Chip
                label="View Full Assessment"
                color="secondary"
                onClick={() => navigate('/analysis')}
                sx={{ borderRadius: 28, px: 1 }}
              />
            </Box>
          </CardContent>
        </Card>

        <Card sx={{ borderRadius: 2, boxShadow: '0 8px 40px -12px
rgba(0,0,0,0.2)' }}>
          <CardContent sx={{ p: 3 }}>
            <Typography variant="h5" component="h2"
fontWeight="bold" gutterBottom color="primary">
              Benefits of Healthier Usage
            </Typography>

            <Box sx={{ display: 'flex', flexDirection: 'column', gap: 1.5
}}>
              {positiveImpacts.slice(0, 3).map((impact, index) => (
                <Box key={index} sx={{ display: 'flex', alignItems: 'flex-
start' }}>
                  <Avatar sx={{ bgcolor: 'secondary.main', width: 32, height:
32, mr: 1.5 }}>
                    <FavoriteIcon fontSize="small" />
                  </Avatar>
                  <Box>
                    <Typography variant="body1" fontWeight="medium">
```

```
                {impact.area}
              </Typography>
              <Typography variant="body2" color="text.secondary">
                {impact.benefits[0]}
              </Typography>
            </Box>
          </Box>
        ))}
      </Box>
    </CardContent>
  </Card>
</Grid>

{/* Strategies Accordion */}
<Grid item xs={12}>
  <Typography variant="h5" component="h2" fontWeight="bold" gutterBottom color="primary" sx={{ mb: 2 }}>
    Effective Strategies for Healthier Social Media Use
  </Typography>

  <Box>
    {improvementStrategies.slice(0, 4).map((strategy, index) => (
      <Accordion key={strategy.id} sx={{ mb: 1, borderRadius: 1, overflow: 'hidden' }}>
        <AccordionSummary
          expandIcon={<ExpandMoreIcon />}
          aria-controls={`panel${index}-content`}
          id={`panel${index}-header`}
        >
          <Typography
```

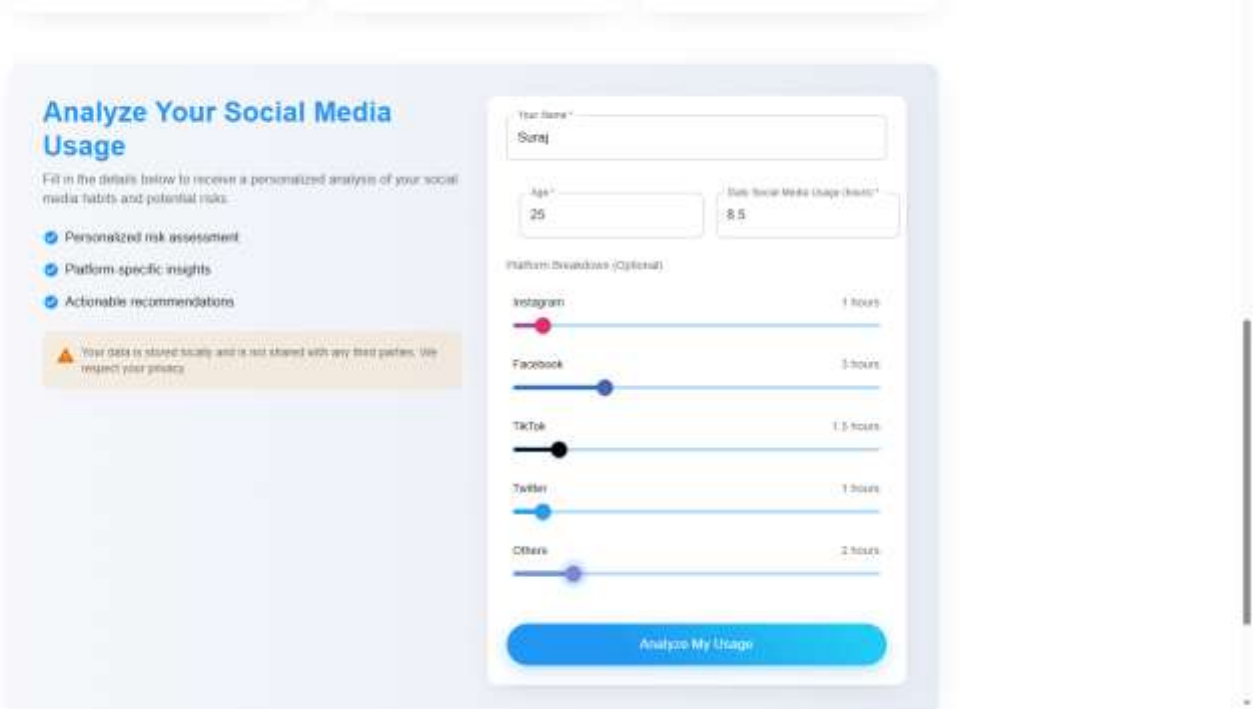
```
fontWeight="medium">{strategy.title}</Typography>
                </AccordionSummary>
                <AccordionDetails>
                  <Grid container spacing={2}>
                    <Grid item xs={12} sm={8}>
                      <Typography
paragraph>{strategy.description}</Typography>
                      <Box sx={{ display: 'flex', gap: 1, flexWrap: 'wrap' }}>
                        <Chip
                          icon={<CheckCircleIcon fontSize="small" />}
                          label={`Effectiveness: ${strategy.effectiveness}%`}
                          color="primary"
                          variant="outlined"
                          size="small"
                        />
                        <Chip
                          label={`Time Required: ${strategy.timeRequired}`}
                          variant="outlined"
                          size="small"
                        />
                      </Box>
                    </Grid>
                    <Grid item xs={12} sm={4}>
                      <Box sx={{
                        bgcolor: '#f5f5f5',
                        borderRadius: 2,
                        p: 1.5,
                        textAlign: 'center',
                        height: '100%',
                        display: 'flex',
```

```
                    flexDirection: 'column',
                    justifyContent: 'center'
                  }}>
                    <Typography variant="body2" color="text.secondary">
                      Difficulty Level
                    </Typography>
                    <Typography variant="h5" color="primary"
fontWeight="bold">
                      {strategy.difficulty}%
                    </Typography>
                  </Box>
                </Grid>
              </Grid>
            </AccordionDetails>
          </Accordion>
        ))}
      </Box>
    </Grid>
```

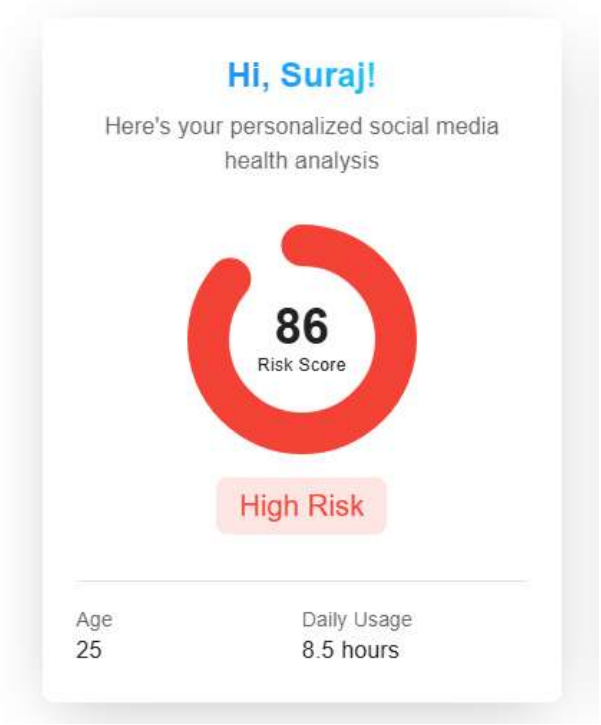
SCREENSHOTS

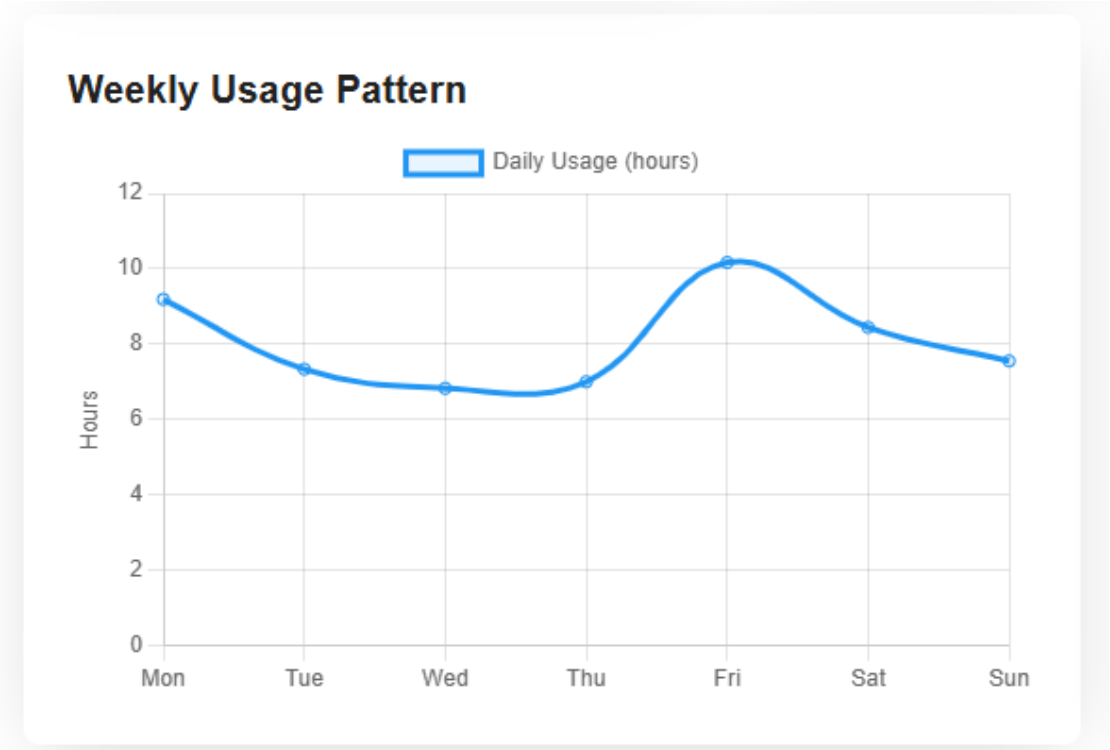
HOME PAGE

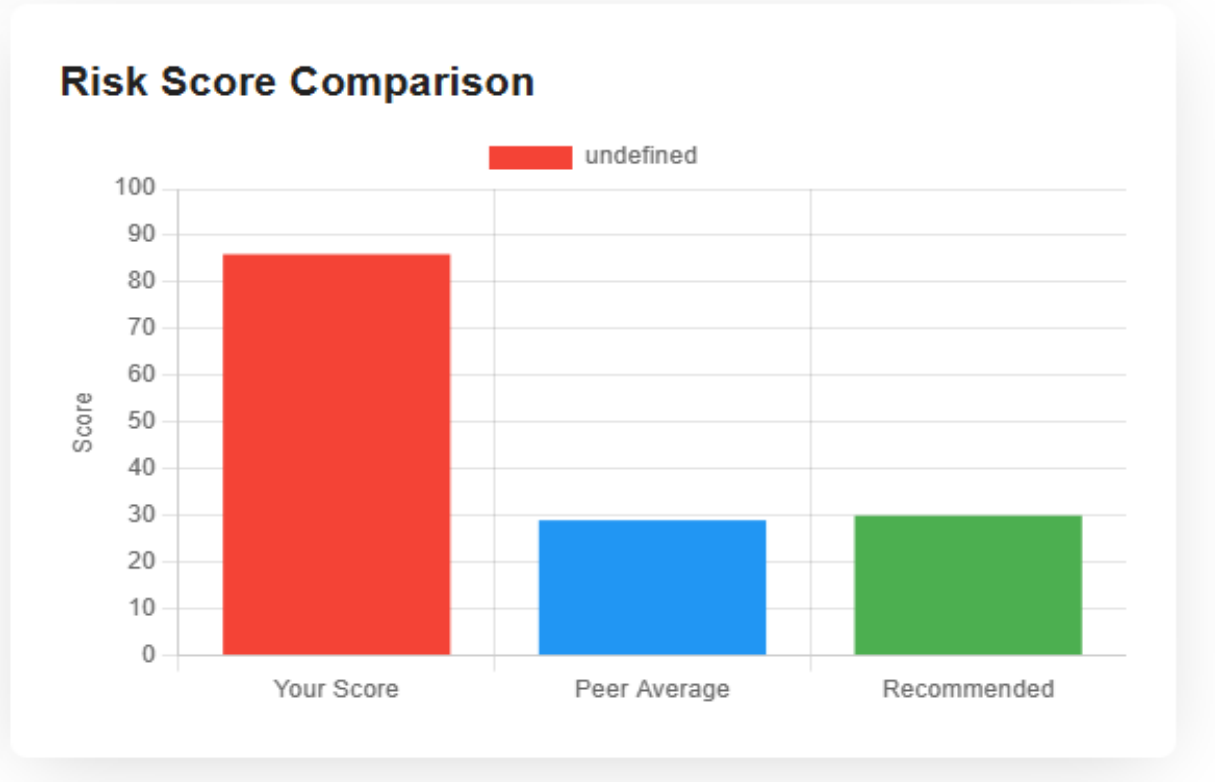
INPUT



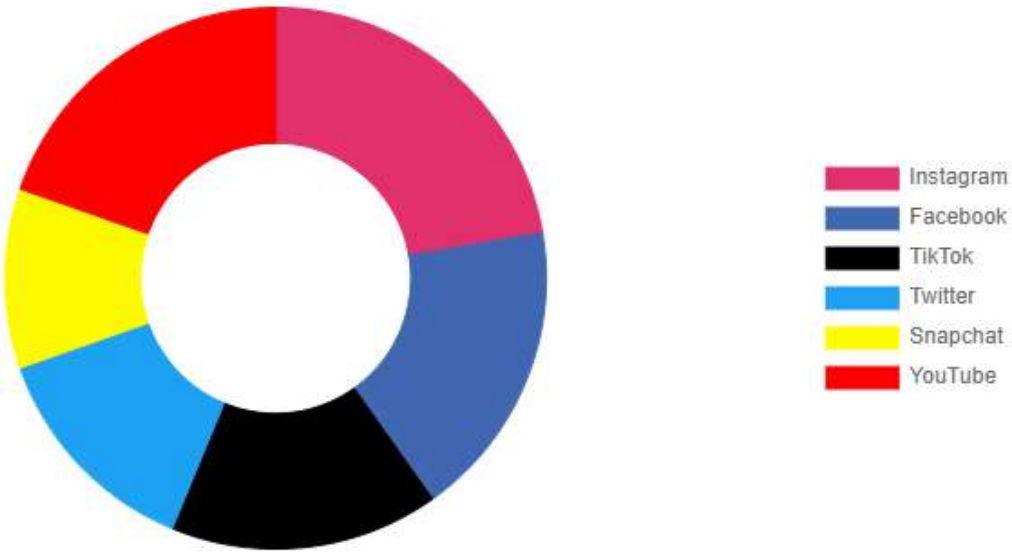
OUTPUT


Hi, Suraj!
Here's your personalized social media health analysis
86
Risk Score
High Risk
Age
25
Daily Usage
8.5 hours


Weekly Usage Pattern
Daily Usage (hours)
Hours
12
10
8
6
4
2
0
Mon
Tue
Wed
Thu
Fri
Sat
Sun


Risk Score Comparison
undefined
100
90
80
70
60
50
40
30
20
10
0
Score
Your Score
Peer Average
Recommended

Platform Usage Breakdown



CHAPTER 4

MARKET POTENTIAL & COMPETITIVE ADVANTAGE

The old manual system was suffering from a series of drawbacks. Since whole of the system was to be maintained with hands the process of keeping, maintaining and retrieving the information was very tedious and lengthy. The records were never used to be in a systematic order. There used to be lots of difficulties in associating any particular transaction with a particular con text. If any information was to be found it was required to go through the different registers, documents there would never exist anything like report generation.

LIKELY BENEFITS

As the population of the world continues to grow, so does the need for healthcare services. This demand for healthcare, in turn, will increase the number of employees seeking care at medical facilities, employees, wellness centers, physicians' practices and holistic groups. While the employee numbers increase,

LIMITATIONS

Data Bias: Risk of biased training data.

Privacy Concerns: Need for stringent data protection measures.

Algorithmic Accuracy: Models may produce false results.

Generalization Challenges: Performance variation across demographics.

Ethical Considerations: Stigmatization and consent concerns must be addressed.

FUTURE SCOPE

Multi-platform Integration: Extend analysis to multiple social media platforms.

Multimodal Analysis: Incorporate diverse data types like images and audio.

Real-time Intervention: Implement immediate support mechanisms.

Longitudinal Analysis: Track changes in mental health states over time.

User Engagement Monitoring: Identify individuals at risk of social isolation.

CONCLUSION

Our project represents a significant stride towards harnessing the power of machine learning and deep learning techniques for early detection and intervention in mental health crises through analysis of social media content. By leveraging models such as Convolution Neural Networks (CNN) and employing K-fold cross validation, we have developed a robust system capable of identifying linguistic markers and patterns associated with mental health conditions, including depression and suicidal ideation.

REFRENCES

Python:
https://www.w3schools.com/python/python_ml_getting_started.asp

NumPy:
https://www.w3schools.com/python/numpy/default.asp

Pandas:
https://www.w3schools.com/python/pandas/default.asp

MySql:
https://www.w3schools.com/mysql/default.asp

Gensim:
https://www.geeksforgeeks.org/nlp-gensim-tutorial-complete-guide-for-beginners

TensorFlow:
https://www.w3schools.com/ai/ai_tensorflow_intro.asp

Youtube:
https://www.youtube.com/watch?v=gmvvaobm7eQ&list=PLeo1K3hjS3uvCeTYTeyfe0-rN5r8zn9rw

Book:
https://www.oreilly.com/library/view/hands-on-machine-learning/9781492032632/