VNR DESIGN-A-THON 2025

MindfulScroll
(Break the Doom Scrolling Cycle)

Team Name : Trishul

Domain/PS Number: Open Innovation/3.3

Team Members :

- Member 1: Vaishnavi Bussa
- Member 2: Gayathri Kodipaka
- Member 3

Agenda

- Abstract
- Introduction
- Problem Statement
- Technical Details and System Design
- Business Model
- Conclusion
- References

Abstract

- Addiction to social media and doom scrolling have grown to be serious problems that have an adverse effect on work and mental health. By encouraging thoughtful content consumption and screen time balance, this project seeks to create an AI-powered digital wellness tool that assists users in breaking the loop of compulsive scrolling. The solution incorporates personalized screen time control tools, offers real-time alerts and recommendations, and uses AI sentiment analysis to identify extended exposure to harmful content. It also uses gamification strategies to motivate users to take breaks and keep up a positive online routine. The technology enables users to make well-informed decisions regarding their screen time by providing comprehensive data and insights into social media usage trends. The attention, mental health, and other aspects of digital well-being are all improved by this method.

Introduction

We are drowning in information while starving for wisdom. – E.O. Wilson.

The rise of social media has led to **doom scrolling**—an endless cycle of consuming distressing or unproductive content, often harming mental well-being. Studies link excessive social media use to anxiety, depression, and sleep disturbances, yet many struggle to regulate their screen time due to addictive platform designs.

Our solution uses **AI-driven analysis, real-time alerts, and gamification** to encourage mindful digital consumption. By detecting prolonged negative engagement and providing personalized interventions, users can develop healthier browsing habits. Detailed analytics offer insights into social media usage, helping individuals take control of their digital well-being.

Problem statement

- Mention the existing solutions(if any) and their drawbacks.
- Social media addiction and doom scrolling contribute to declining mental health, reduced productivity, and disrupted sleep cycles.
- According to research, users spend an average of 2.5 hours daily on social media, with a significant portion engaging in doom scrolling.
- Existing solutions such as app-based time restrictions or manual timers fail due to the lack of personalization and adaptability.
- Our AI-driven tool offers a proactive and personalized approach, helping users develop mindful digital consumption habits.
- The target users include students, professionals, and anyone experiencing excessive screen time and social media dependency.

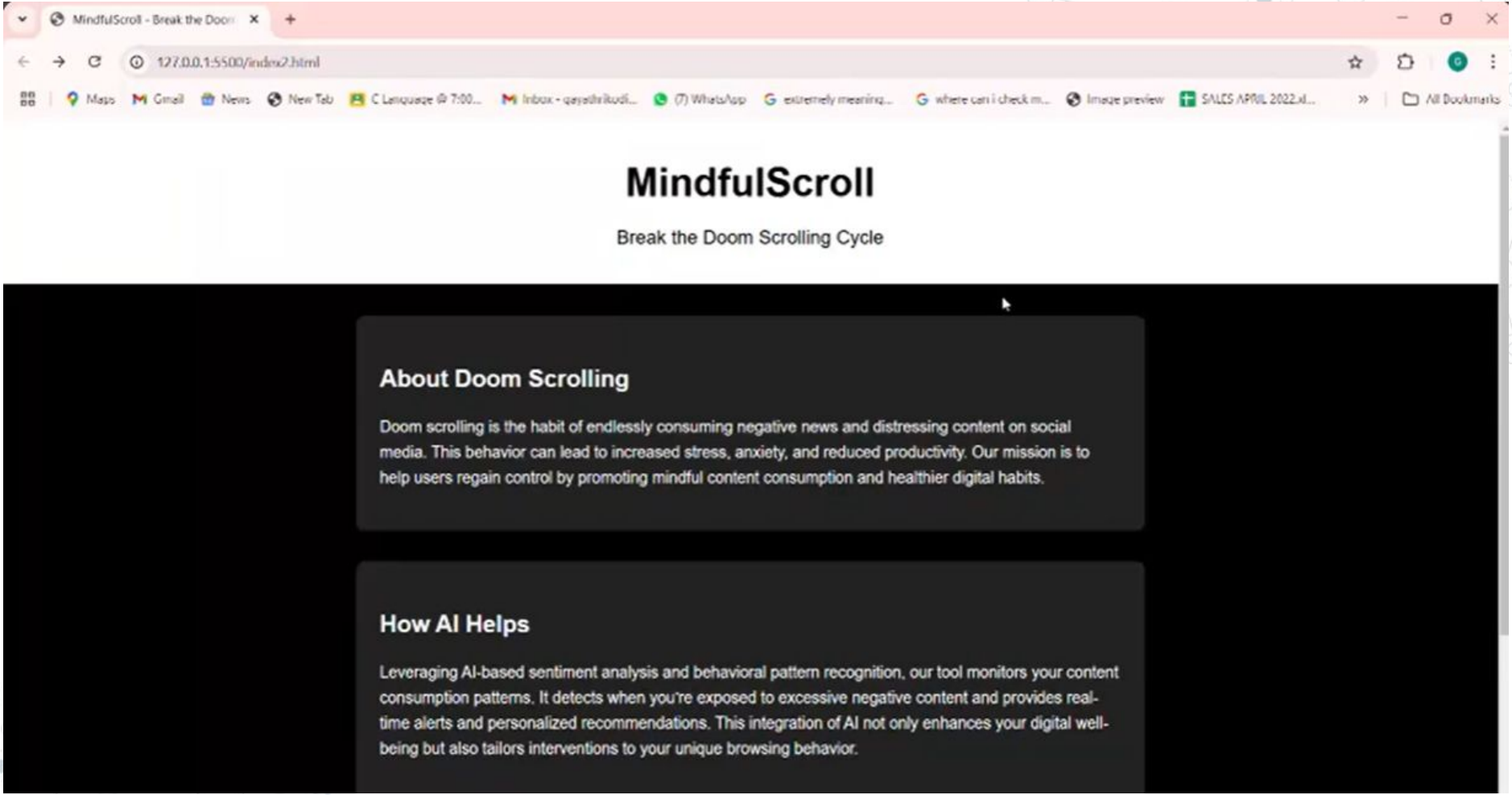
Technical Details

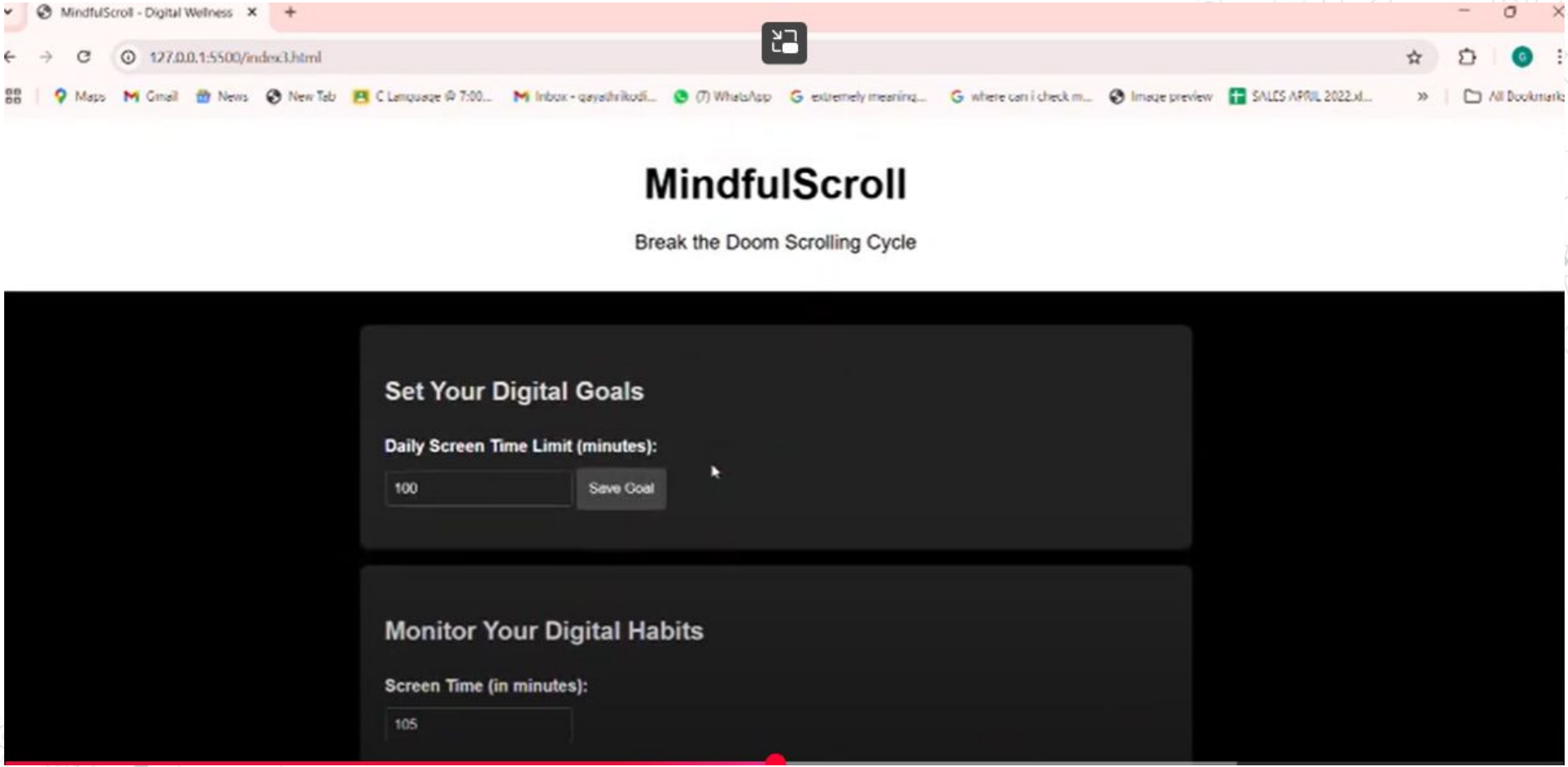
- **Technologies & Frameworks:** Python, React, TensorFlow, OpenCV, Flask, Firebase, AWS Cloud Services
- **AI & NLP Models:** Sentiment analysis, content classification, activity tracking
- **APIs:** Twitter API, Facebook Graph API, Instagram API for content analysis
- **Database & Storage:** Firebase Firestore for real-time data, AWS S3 for **APIs:** Twitter API, Facebook Graph API, Instagram API for content analysis
- Media storage

Prototype link: https://youtu.be/u58LQVRlK0E?si=fRgRTpJrKt0fW5q4

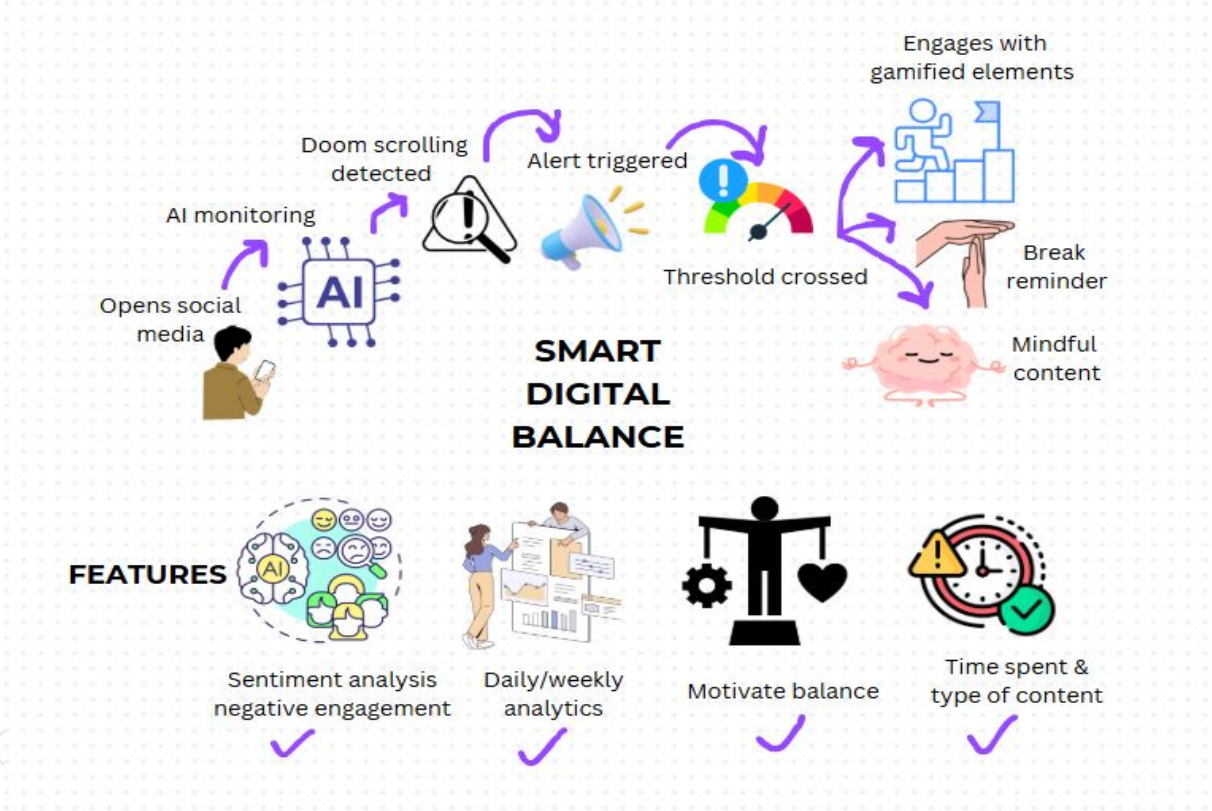
System Design

- **User Interaction Layer:** Mobile app with a user-friendly interface for insights and interventions.
- **Recommendation System:** Generates personalized interventions and screen time break reminders.
- **Gamification Module:** Encourages positive digital habits through reward mechanisms and achievements.
- **Dashboard & Analytics:** Provides users with insights into their social media habits, offering weekly reports.
- **AI Analysis Engine:** Machine learning model to detect doom scrolling patterns based on content and time spent.


MindfulScroll - Break the Doom
127.0.0.1:5500/index2.html
Maps
Gmail
News
New Tab
C Language @ 7:00...
Inbox - qayadhituddi...
(7) WhatsApp
extremely meaning...
where can i check m...
Image preview
SALES APRIL 2022.xl...
All Bookmarks
MindfulScroll
Break the Doom Scrolling Cycle
About Doom Scrolling
Doom scrolling is the habit of endlessly consuming negative news and distressing content on social media. This behavior can lead to increased stress, anxiety, and reduced productivity. Our mission is to help users regain control by promoting mindful content consumption and healthier digital habits.
How AI Helps
Leveraging AI-based sentiment analysis and behavioral pattern recognition, our tool monitors your content consumption patterns. It detects when you're exposed to excessive negative content and provides real-time alerts and personalized recommendations. This integration of AI not only enhances your digital well-being but also tailors interventions to your unique browsing behavior.


MindfulScroll - Digital Wellness
127.0.0.1:5500/index3.html
MindfulScroll
Break the Doom Scrolling Cycle
Set Your Digital Goals
Daily Screen Time Limit (minutes):
100
Save Goal
Monitor Your Digital Habits
Screen Time (in minutes):
105

Prototype


Engages with gamified elements
Doom scrolling detected
Alert triggered
AI monitoring
AI
Opens social media
Threshold crossed
Break reminder
Mindful content
SMART DIGITAL BALANCE
FEATURES
AI
Sentiment analysis negative engagement
Daily/weekly analytics
Motivate balance
Time spent & type of content

Business Prospect

- **Market Alignment & Trends** – Rising concerns over digital well-being and mental health create demand for AI-driven screen time management solutions.
- **Problem Importance & Market Impact** – Doom scrolling negatively affects productivity, mental health, and sleep, making an AI-powered solution necessary.
- **Target Audience & Beneficiaries** – Consumers, corporates, educational institutions, and wellness brands can benefit from healthier digital habits.
- **Monetization Strategy** – Revenue can be generated through freemium models, subscriptions, B2B SaaS, API licensing, and ad partnerships.
- **Unique Selling Proposition (USP)** – AI-driven real-time alerts, gamification, and content analysis make it more engaging than standard screen time apps.

Conclusion

- **Impactful Solution** – The AI-powered tool helps combat **doom scrolling and social media addiction**, promoting **healthier digital habits**.
- **User & Industry Benefits** – Enhances **mental well-being, productivity, and focus** for individuals, while also benefiting **corporates, EdTech, and wellness brands**.
- **Market Relevance** – Addresses a **growing global concern** with digital burnout, aligning with trends in **digital wellness and responsible tech**.
- **Future Scope** – Can be expanded with **wearable integrations, AI-driven blocking, chatbot coaching, and corporate wellness programs**.
- **Final Takeaway** – With over **60% of users experiencing excessive screen time**, this solution drives a **more balanced and mindful digital future**.

References

- The Impact of Social Media on Mental Health – Journal of Cyberpsychology
- OpenAI Research on Sentiment Analysis & NLP
- Breaking the Digital Addiction Cycle – Harvard Business Review
- Research on Digital Well-Being by Google & Apple
- Various API documentation sources (Twitter, Instagram, Facebook)