

24-25J-293

# Utilising Machine Learning for the Development of a Mobile Application and Web Extension for Predictive Mental Health Monitoring and Personalized Support

AI

Mental Health

Support

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[www.youokay.live](http://www.youokay.live)

01

# Research Problem

Digital technology significantly impacts individuals' mental health, often through their online interactions and behaviours. However, there is a dearth of comprehensive tools capable of accurately tracking and analysing these behaviours, hindering the timely and personalised provision of mental health support.

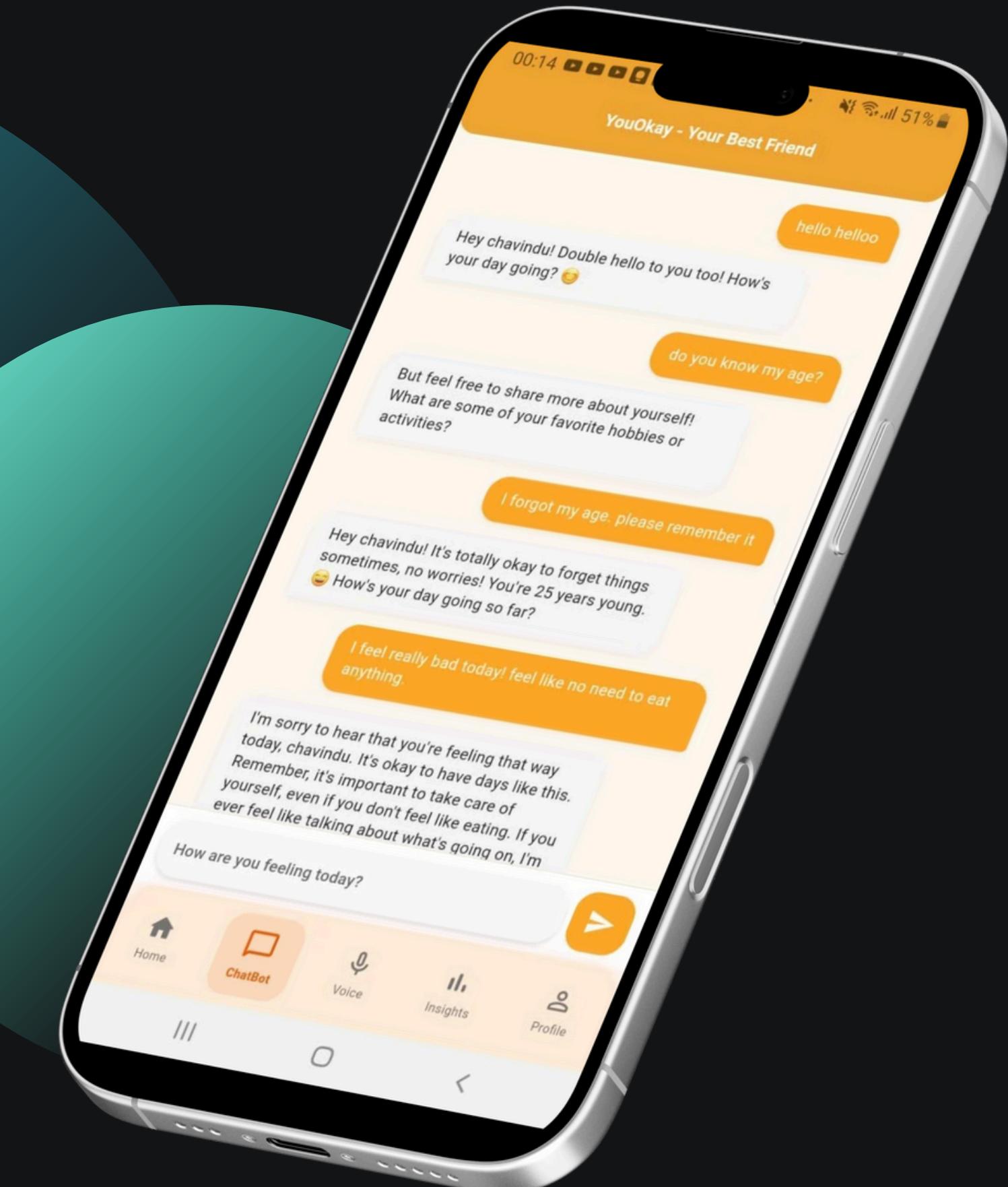
# 02 Question We Understood

How can a mobile application and web extension effectively integrate analysis of digital interactions, emotion detection, physical data collection, and face recognition to provide personalized, real-time mental health support to users?

# YouOkay

## Research Solution

- Mobile App
- Web Extension
- AI Powered Support



# Objectives of YouOkay

## Machine Learning Analysis

Analyses digital interactions to assess mental health status.



## Emotional State Assessments

Gauge the emotional state based on behaviour patterns.



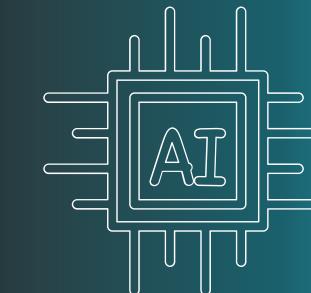
## Supportive

Provides tailored support when mental health is not critical.



## AI Powered

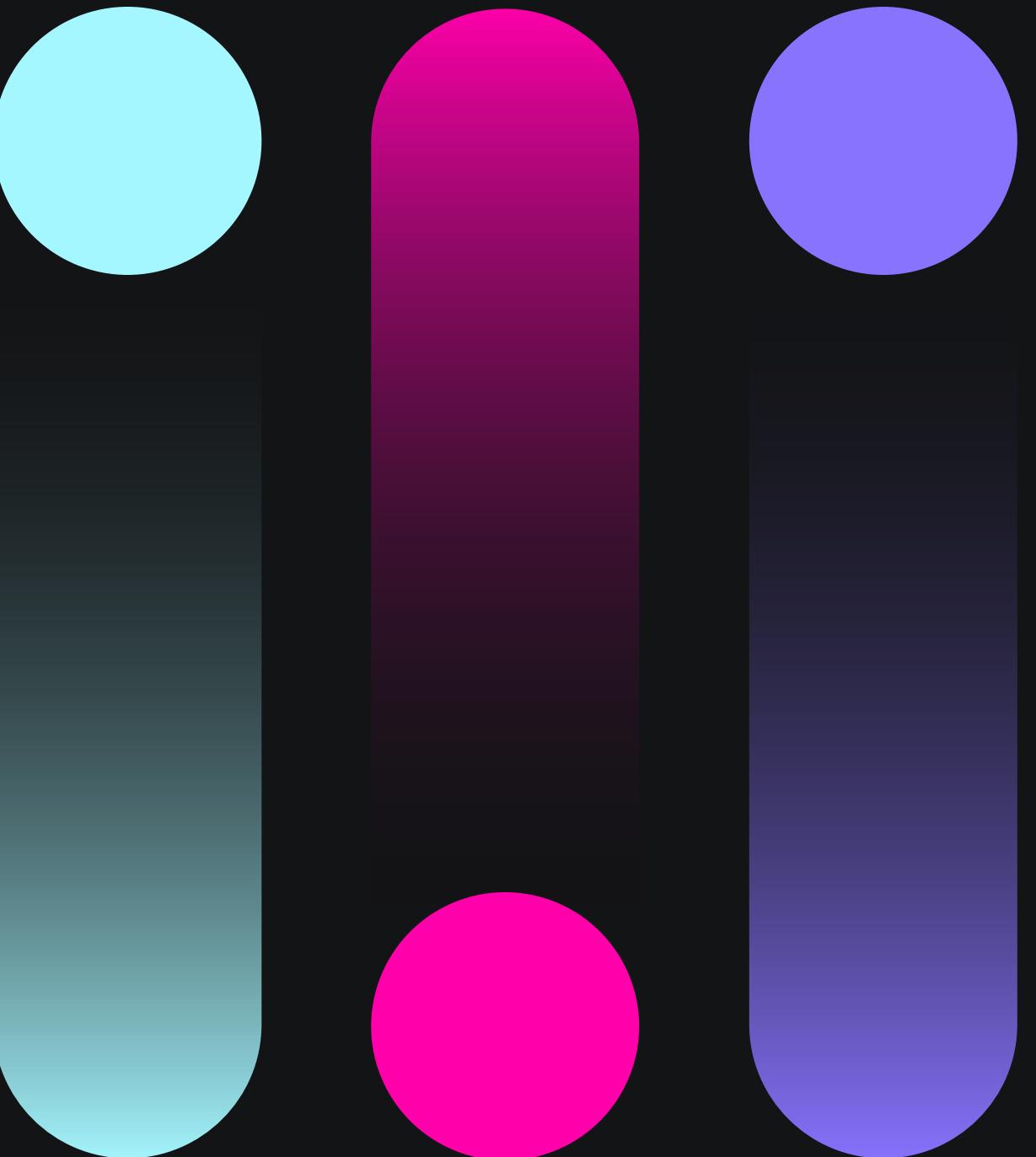
Provide Automated solution by reducing human involvements



# Technologies

For the Overall Project

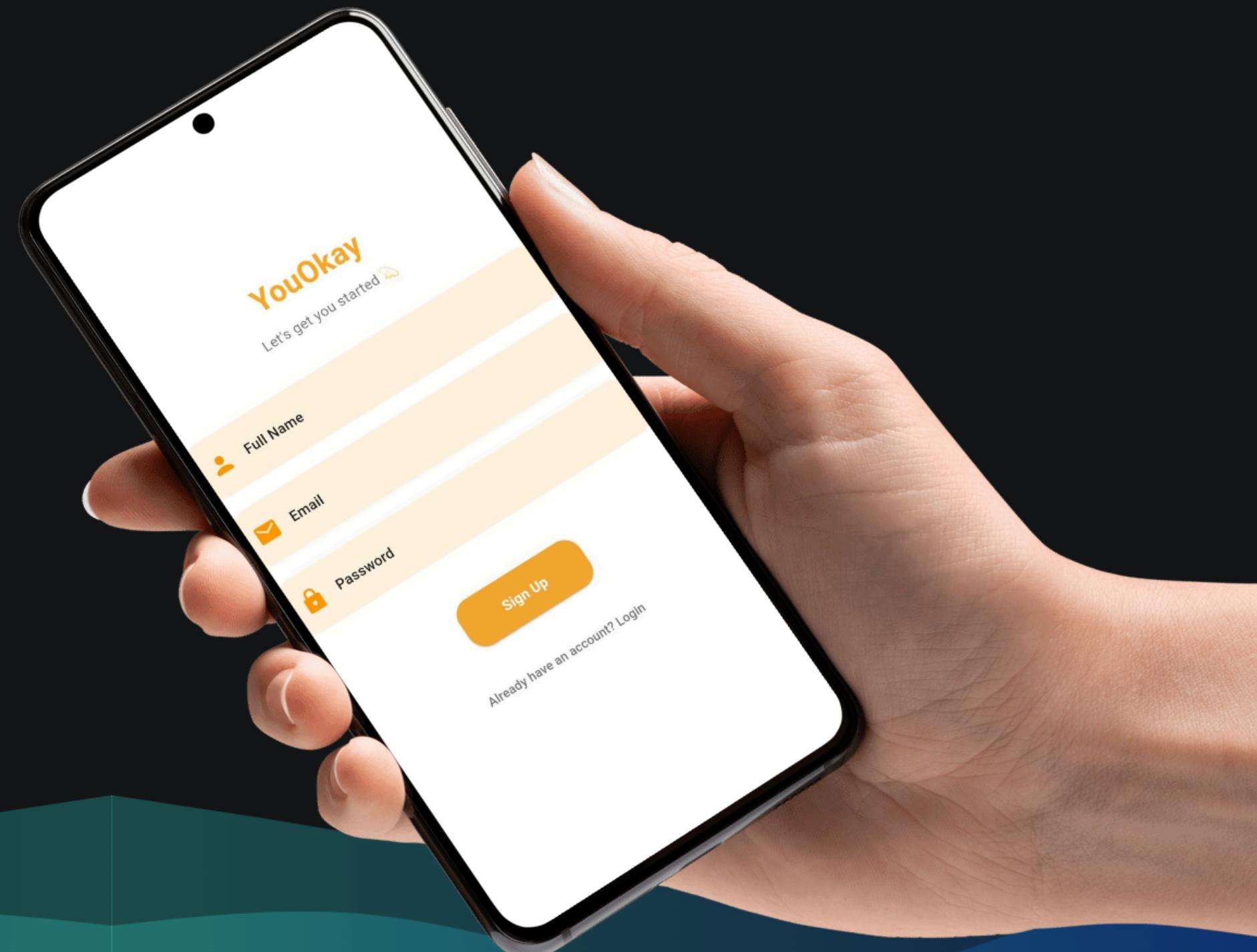
- Flutter
- NodeJS
- MongoDB
- Azure
- JavaScript
- Python
- Flask
- OpenAI
- SciKit Learn
- Tensorflow



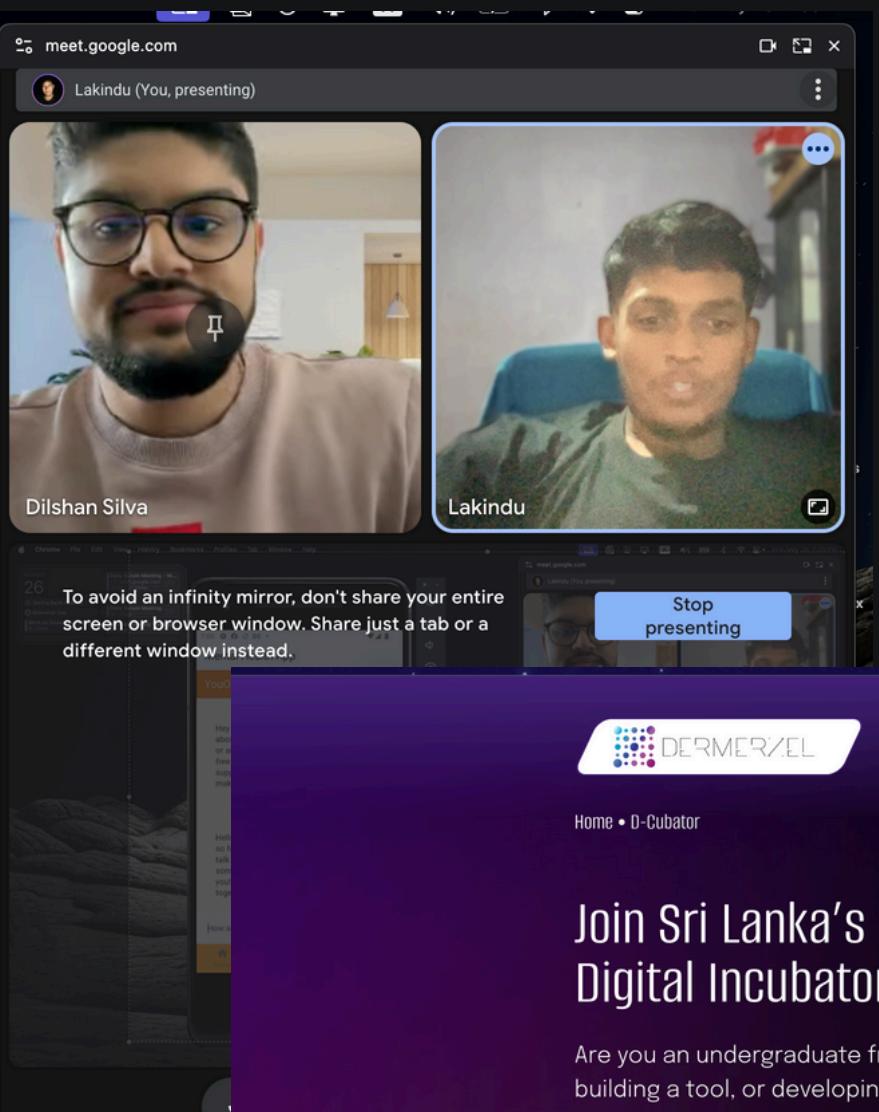
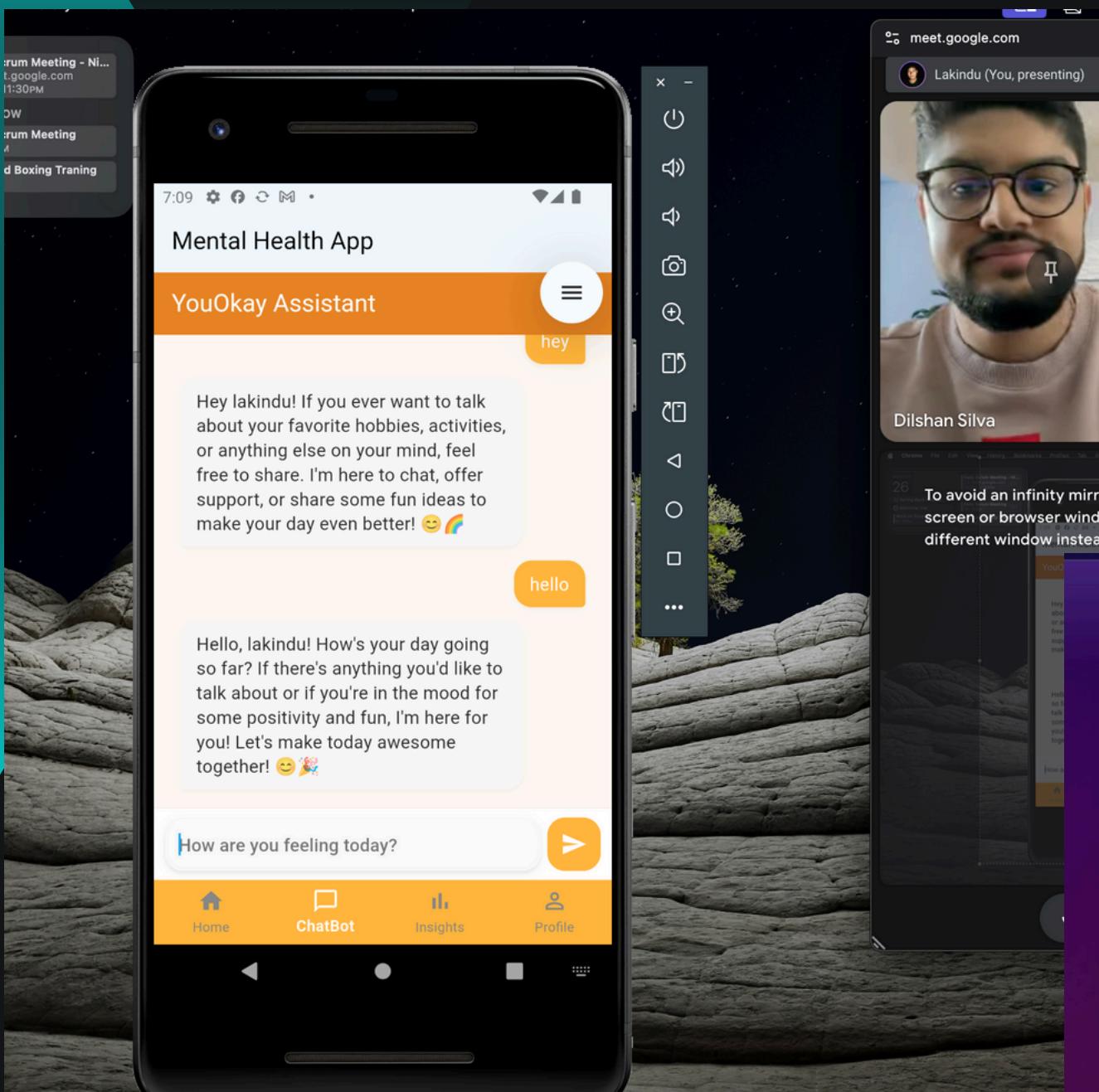
# Introduce this product to the Market

As a product, we believe this would be one of the best mental health-supporting AI-powered solutions in the market.

- B2B
- B2C



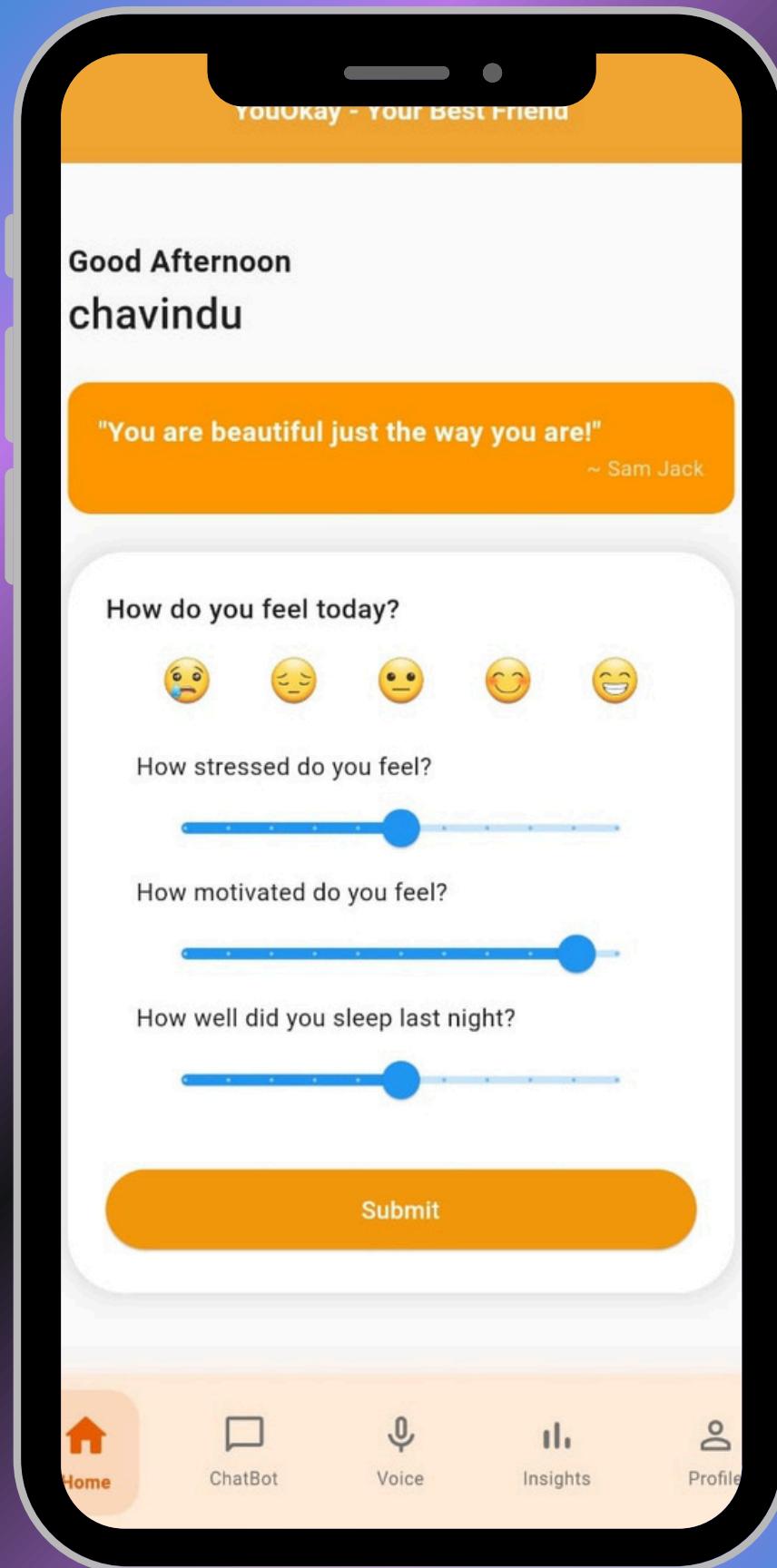
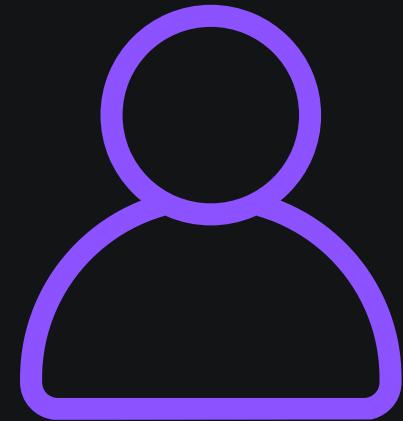
# Product Pitching

A screenshot of the Dermerzel D-Cubator AI Incubator website. The header features the 'DERMERZEL' logo and navigation links for 'AI PRODUCTS', 'AI SERVICES', 'D-CUBATOR', 'BLOG', 'CAREERS', 'ABOUT', and 'CONTACT US'. The main content area has a purple background and features the text: 'Join Sri Lanka's Largest Digital Incubator for AI'. It asks: 'Are you an undergraduate from a Sri Lankan university? With a brilliant idea, building a tool, or developing a solution with commercial potential?'. It continues: 'If so, Dermerzel can connect you with a global funding partner to help you build it better.' and 'Get funded for your idea, plus receive mentoring from world-leading experts who'll guide you every step of the way.' A deadline for submission is mentioned: 'Deadline for submission - 15<sup>th</sup> June 2025'. The footer contains the text 'D-CUBATOR AI INCUBATOR' and 'Who is it for?'. On the right side of the website, there is a large, shiny, multi-faceted cube.

- For Feedback
- Discussed About Commercialisation
- Get Investment

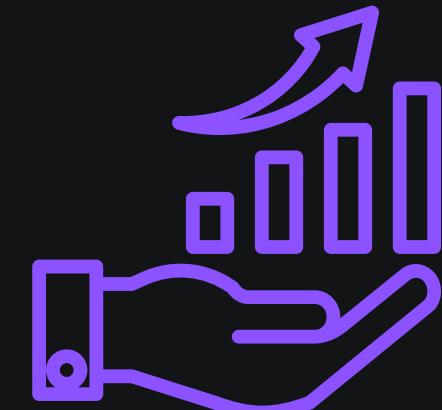
# B2C

- B2C Product for All Consumers
- This product is accessible to individuals and organisations alike.
- Individual Pricing: **Free**
- Organisational Pricing: **Paid**



# B2B

- Provide this solution as a service API to businesses that are already in the market with their existing products, such as human resources solutions.



our commercial  
website is  
operational

[youokay.live](http://youokay.live)

# Alwis P.K.D.L.W

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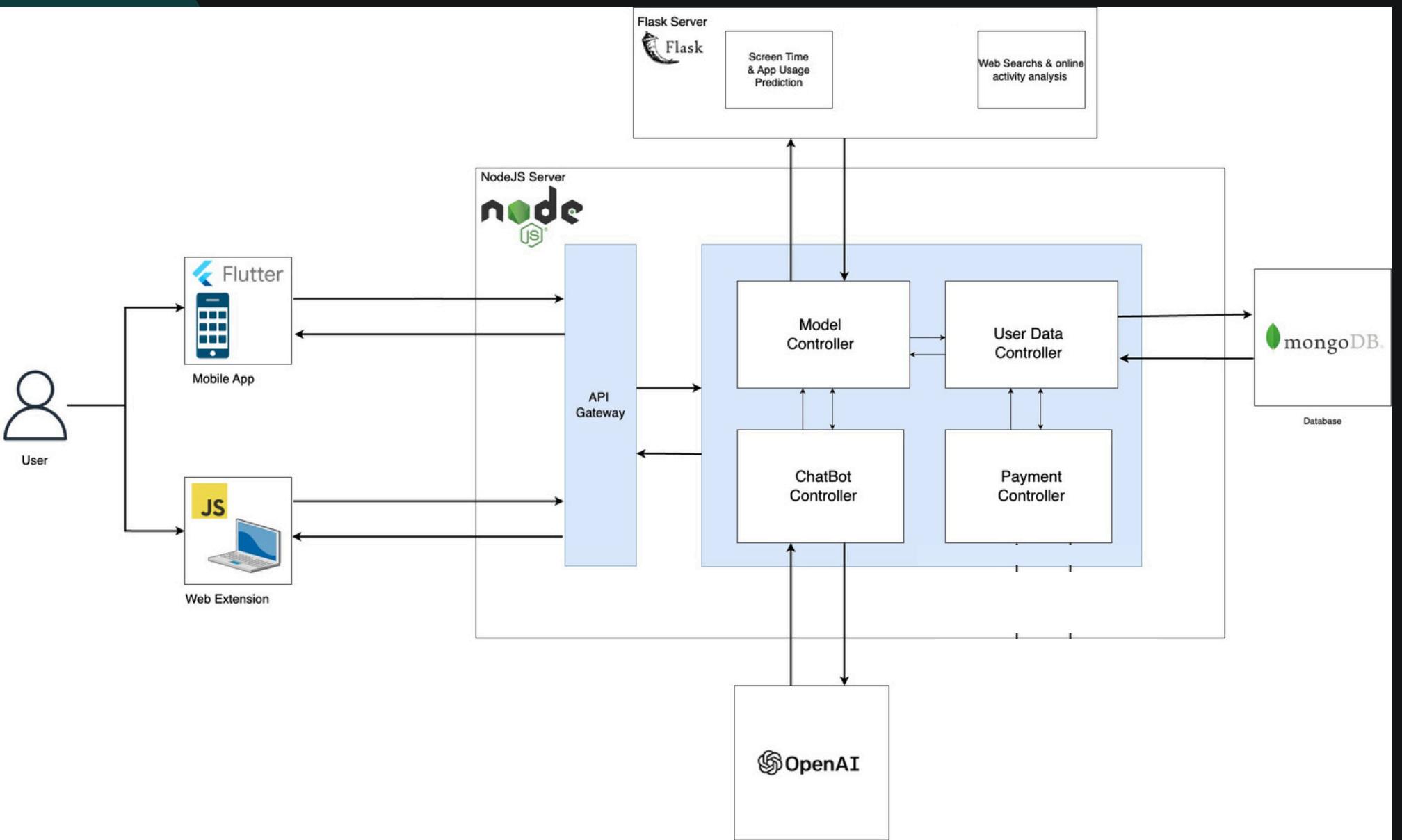
Predict user mental health behaviours using machine learning by analysing web searches, app usage, and online activities, and create a chatbot to interact with users.



# Task

- 1 Data collection from users through the Screen Time API, Web Searches, and Chatbots.
- 2 Developed two model analysis datasets, including screentime and sentiment analysis.
- 3 Developed Web extention which can track users web search and implmeted mobile app for able users to h track treir screentime and access personal assistent.
- 4 Developed a commercial website and deployed all to production on Microsoft Azure.

# Tech Side



- Redis
- Nginx
- Open Als
- PM2
- GitHub Actio

# Chavindu

IT21306204

Daily user emotion Data  
Collection, Voice, and Data  
Integration Mental Health  
System





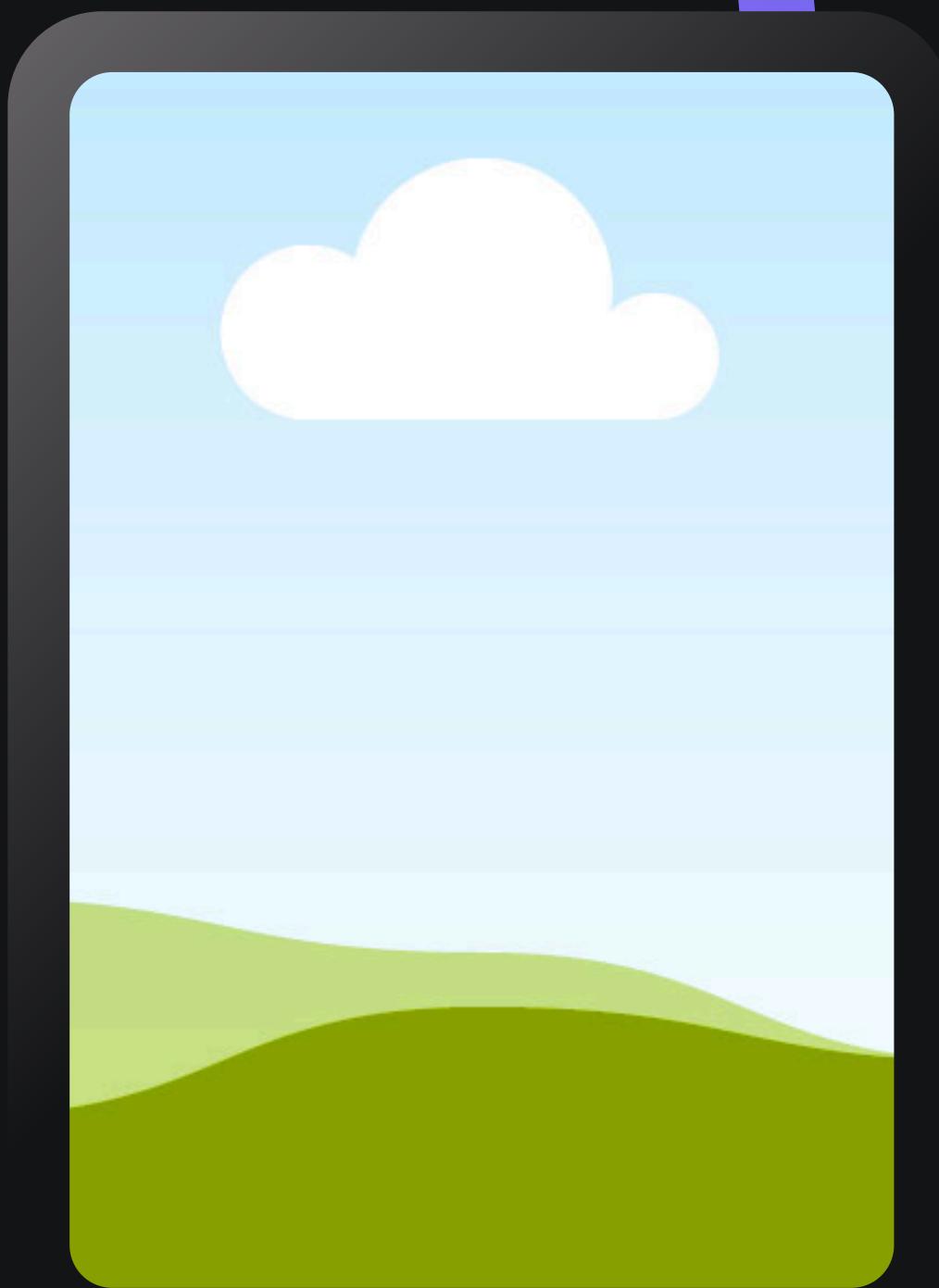
# Task

- 1 Data gathering from Daily User Emotion Form
- 2 Data gathering from User Voice
- 3 UI Creation
- 4 Overall Data gathering and visualization

# Ahla

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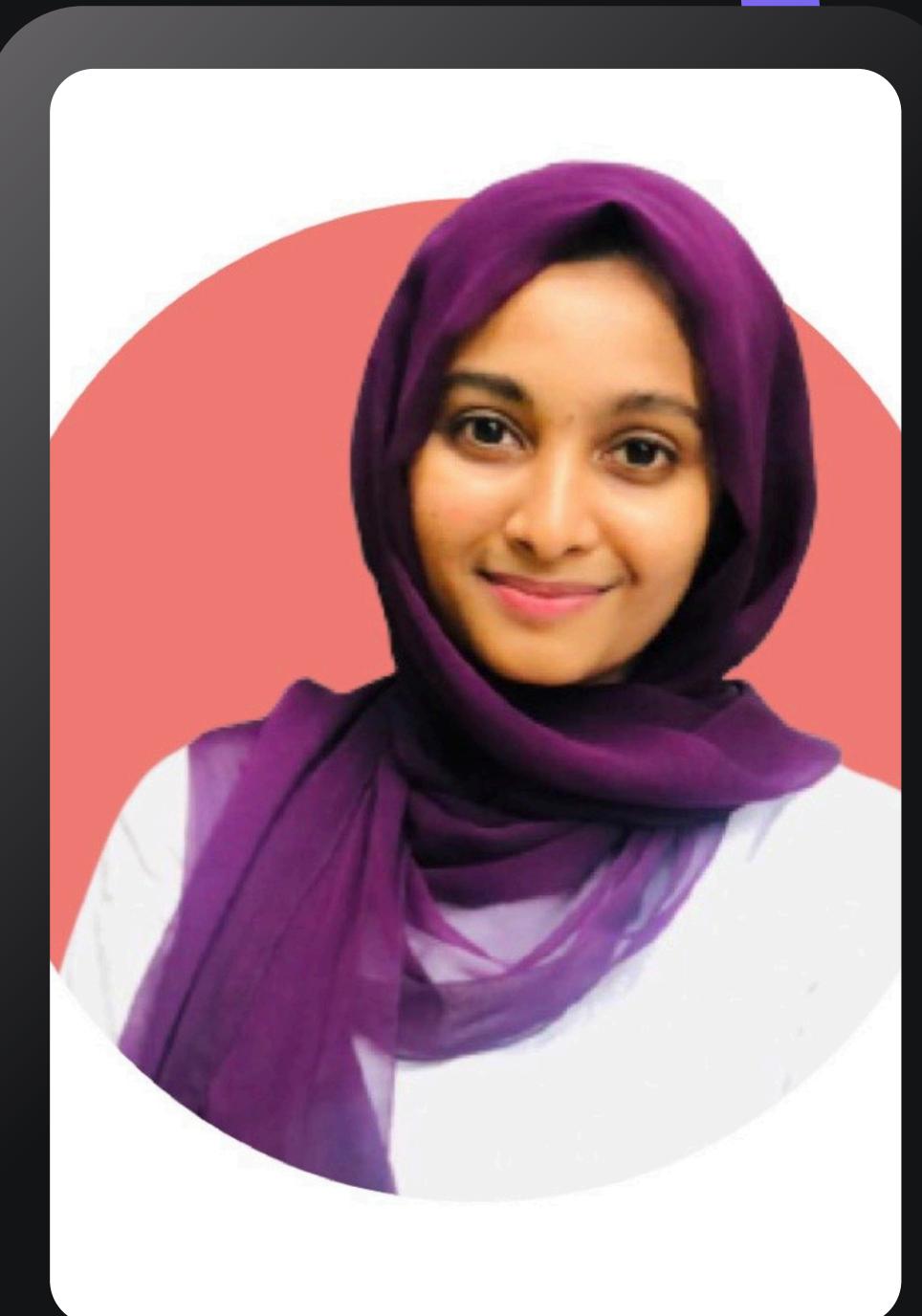
Predict user mental health behaviours using machine learning by analysing web searches, app usage, and online activities, and create a chatbot to interact with users.



# Jahani M.J.A

IT21346736

INCORPORATING BIOMETRIC  
DATA TO ENHANCE MENTAL  
WELLBEING - REAL-TIME  
HEARTBEAT MONITORING AND  
PERSONALIZED HEALTH  
FEEDBACK



# IOT device to obtain the heartbeat

- Real-time
- Accurate
- Seamless Integration



# Heart Rate Variability (HRV) Insights

- HRV tracking for recovery, stress, and autonomic balance



# Personalized Feedback using ML

- Adaptive Feedback based on user details
- Continuous learning and improvement
- On-Device Inference for Speed & Privacy



# Feedback & Coaching

## Personalized Feedback using ML

- ML-based suggestions (e.g., rest, hydration, stress relief)
- Breathing and mindfulness exercises triggered by biometric data
- In-app voice assistant or chatbot for guidance

