

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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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

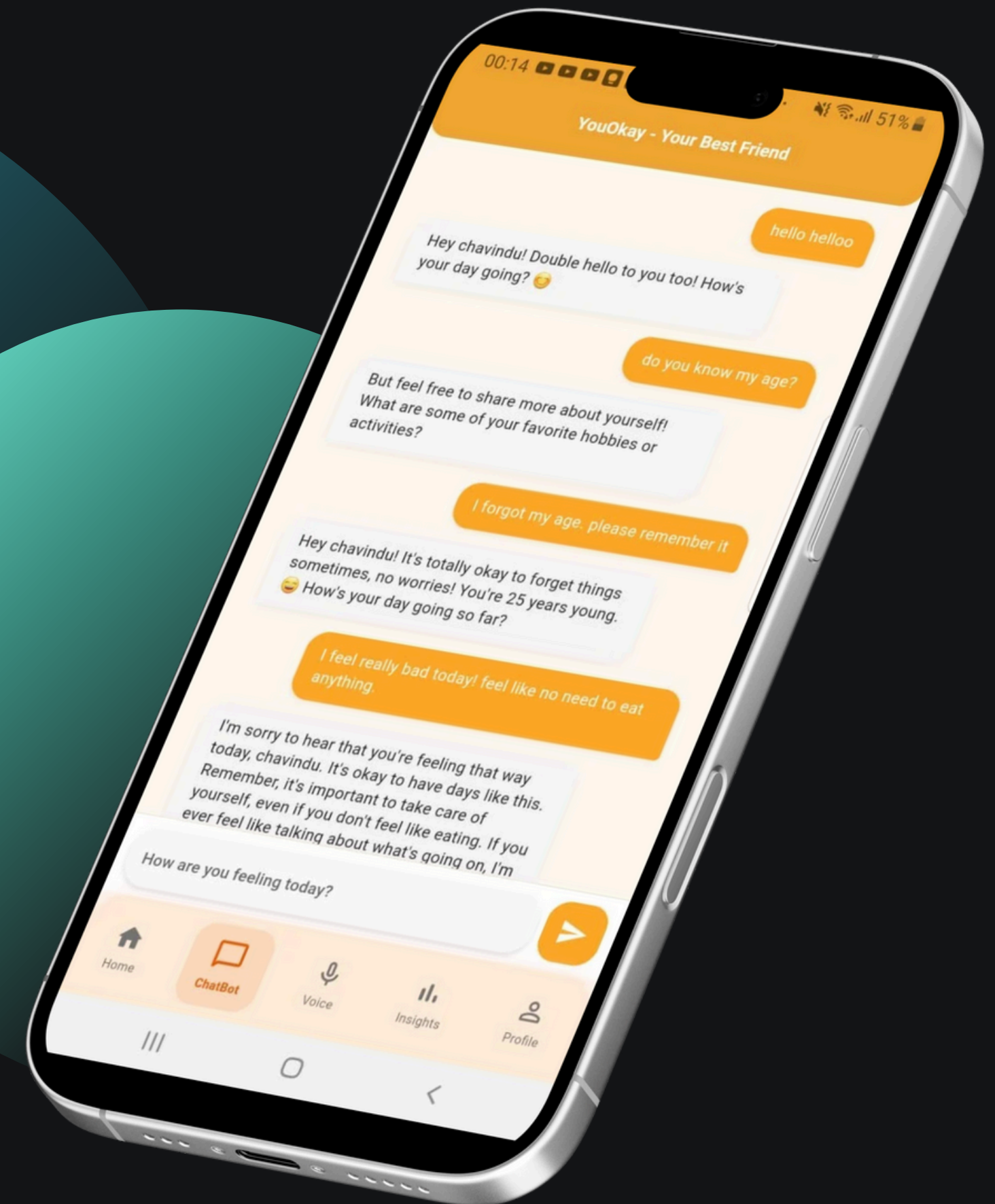
How can a mobile application and web extension effectively integrate analysis of digital interactions, emotion detection, physical data collection, and face recognition to provide personalized, real-time mental health support to users?

YouOkay

Research Solution

- Mobile App
- Web Extension
- AI Powered Support

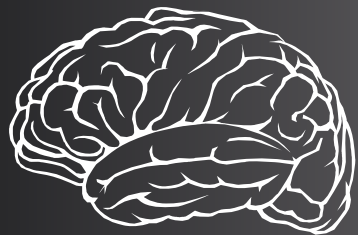
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Objectives of YouOkay

Machine Learning Analysis

Analyses digital interactions to assess mental health status.



Emotional State Assessments

Gauge the emotional state based on behaviour patterns.



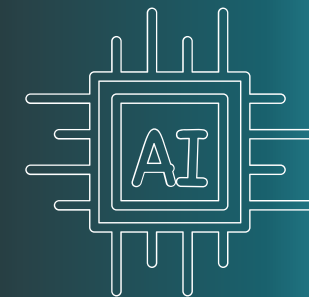
Supportive

Provides tailored support when mental health is not critical.



AI Powered

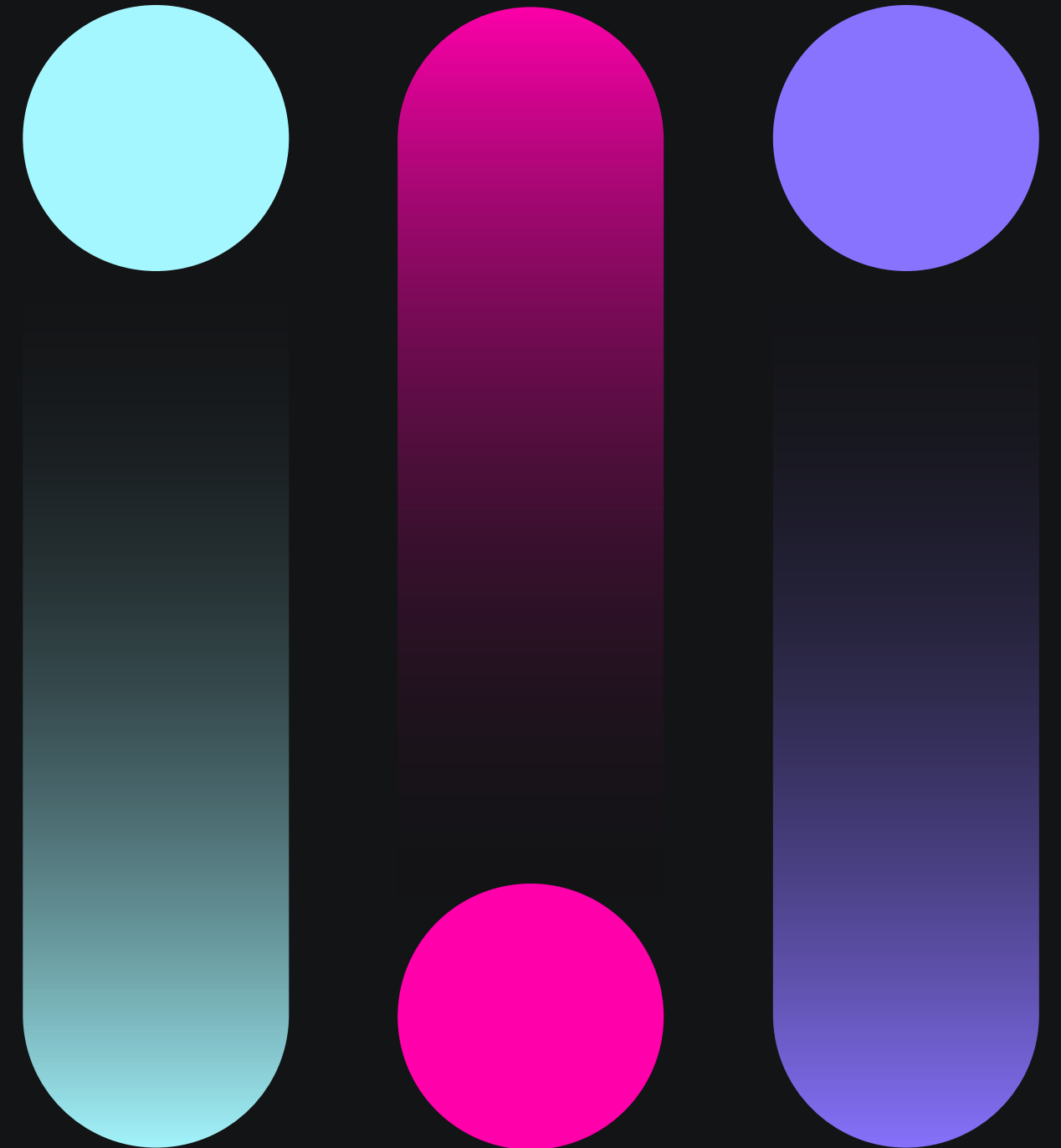
Provide Automated solution by reducing human involments



Technologies

For the Overall Project

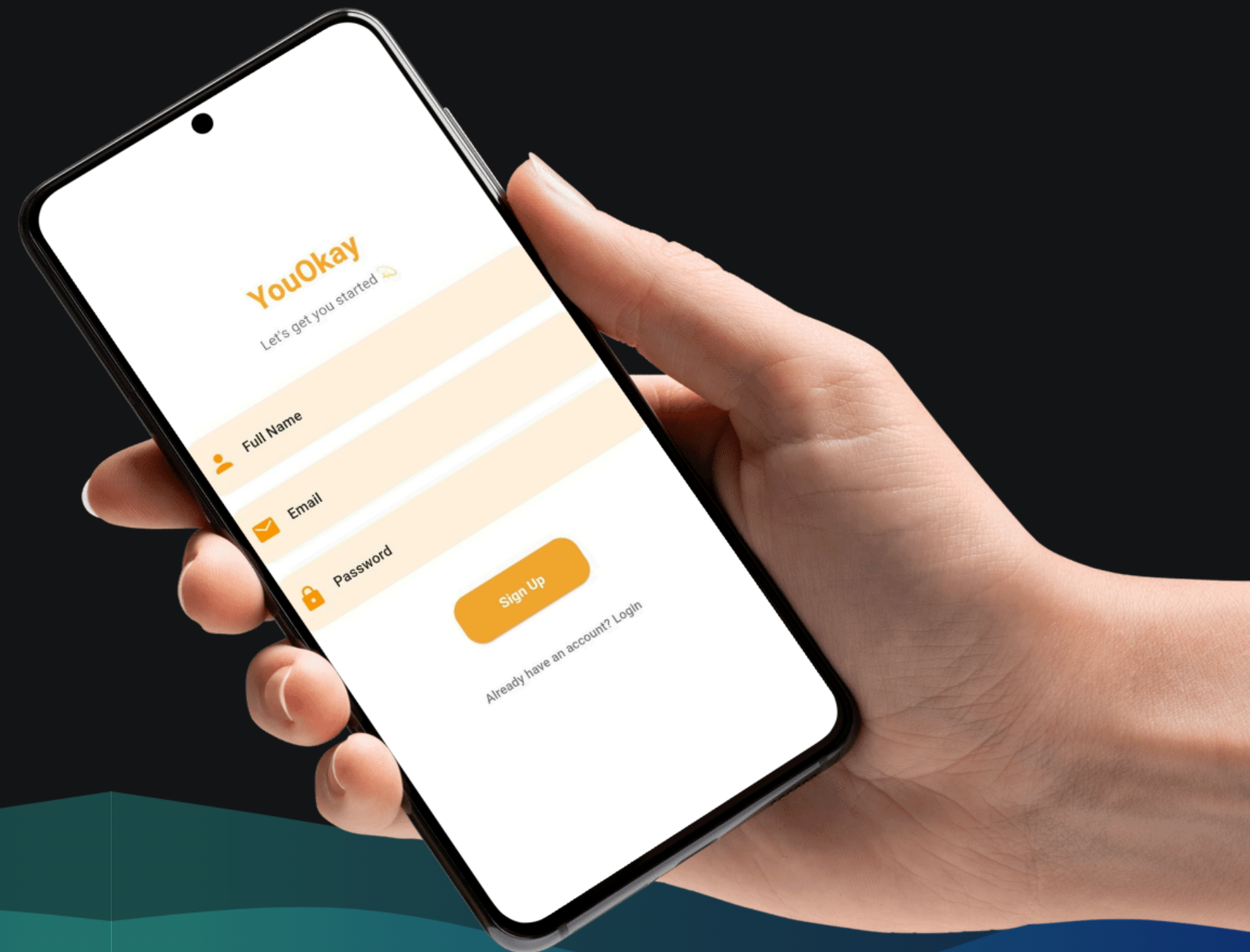
- Flutter
- NodeJS
- MongoDB
- Azure
- JavaScript
- Python
- Flask
- OpenAI
- SciKit Learn
- Tensorflow



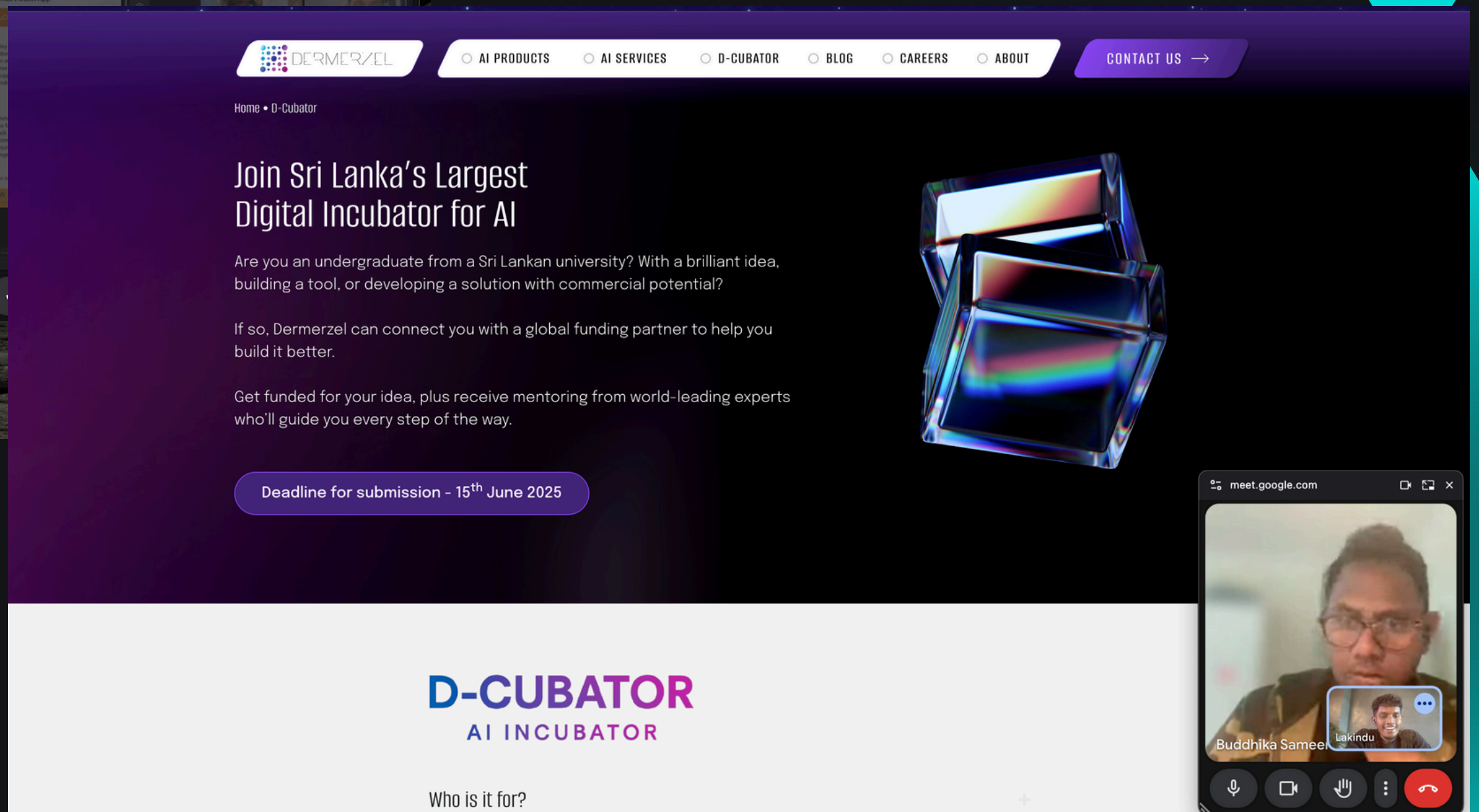
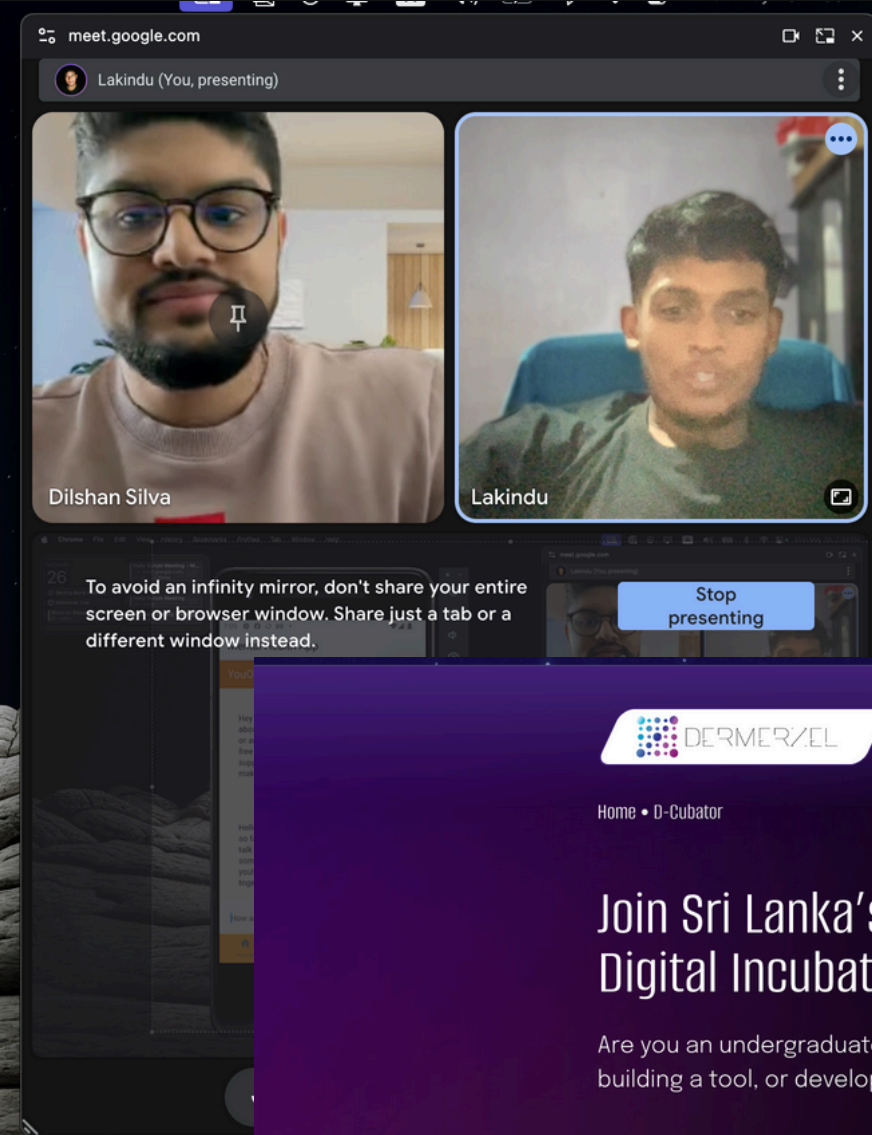
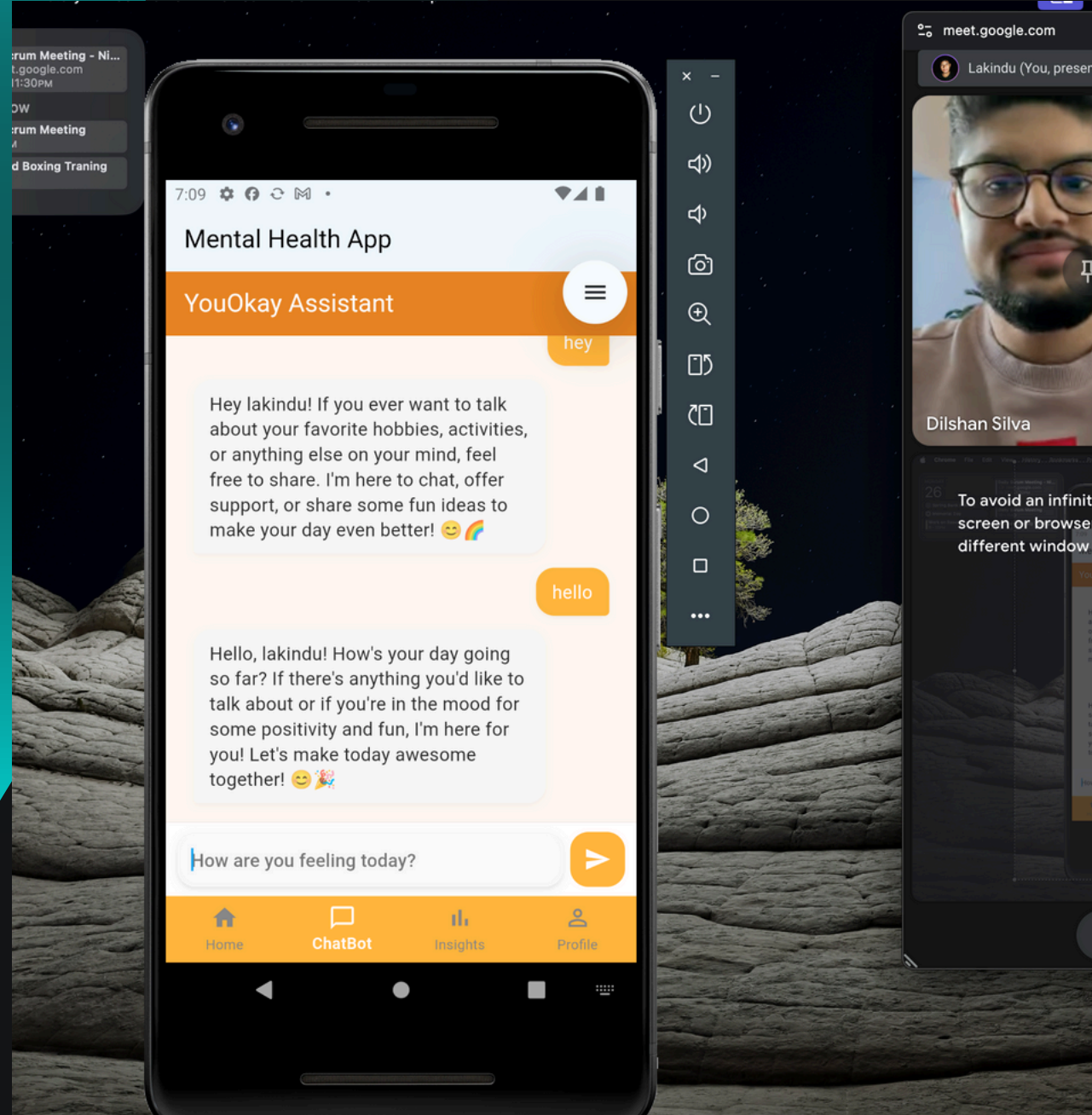
Introduce this product to the Market

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

- B2B
- B2C



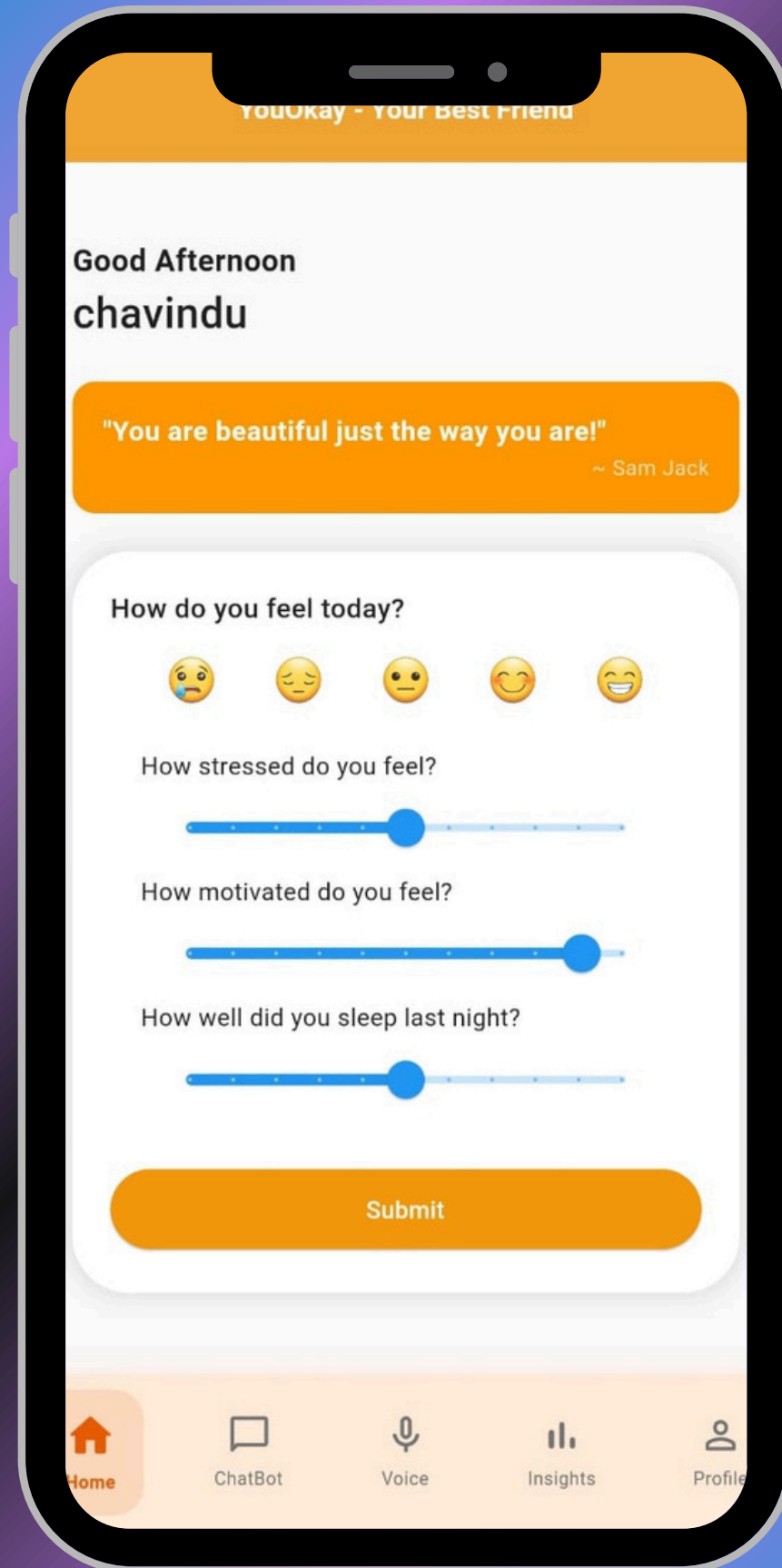
Product Pitching



- For Feedback
- Discussed About Commercialisation
- Get Investment

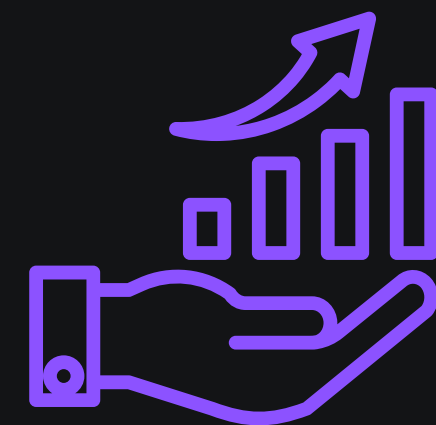
B2C

- 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**

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Alwis P.K.D.L.W

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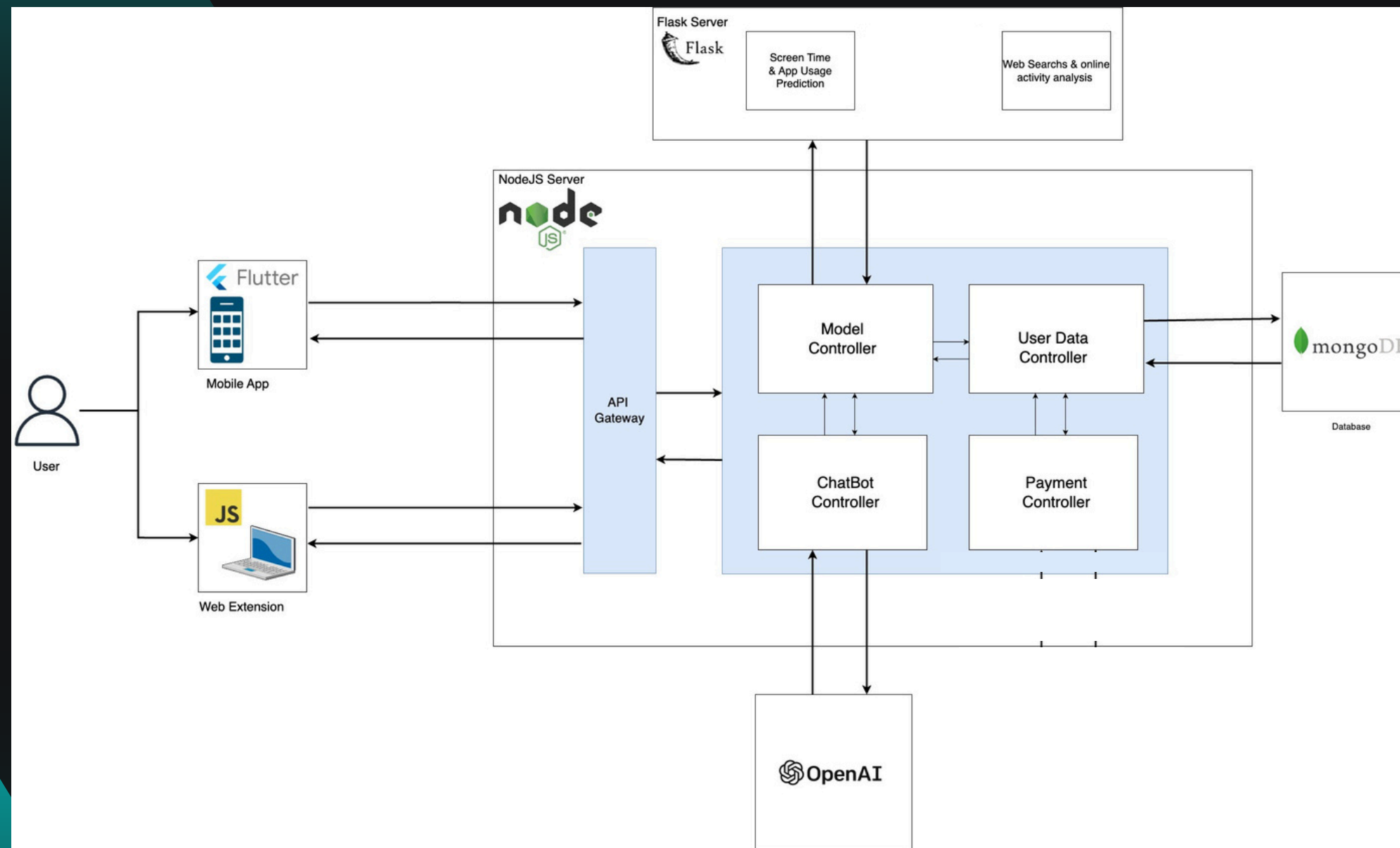
Predict user mental health behaviours using machine learning by analysing web searches, app usage, and online activities, and create a chatbot to interact with users.



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 AIs
- 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

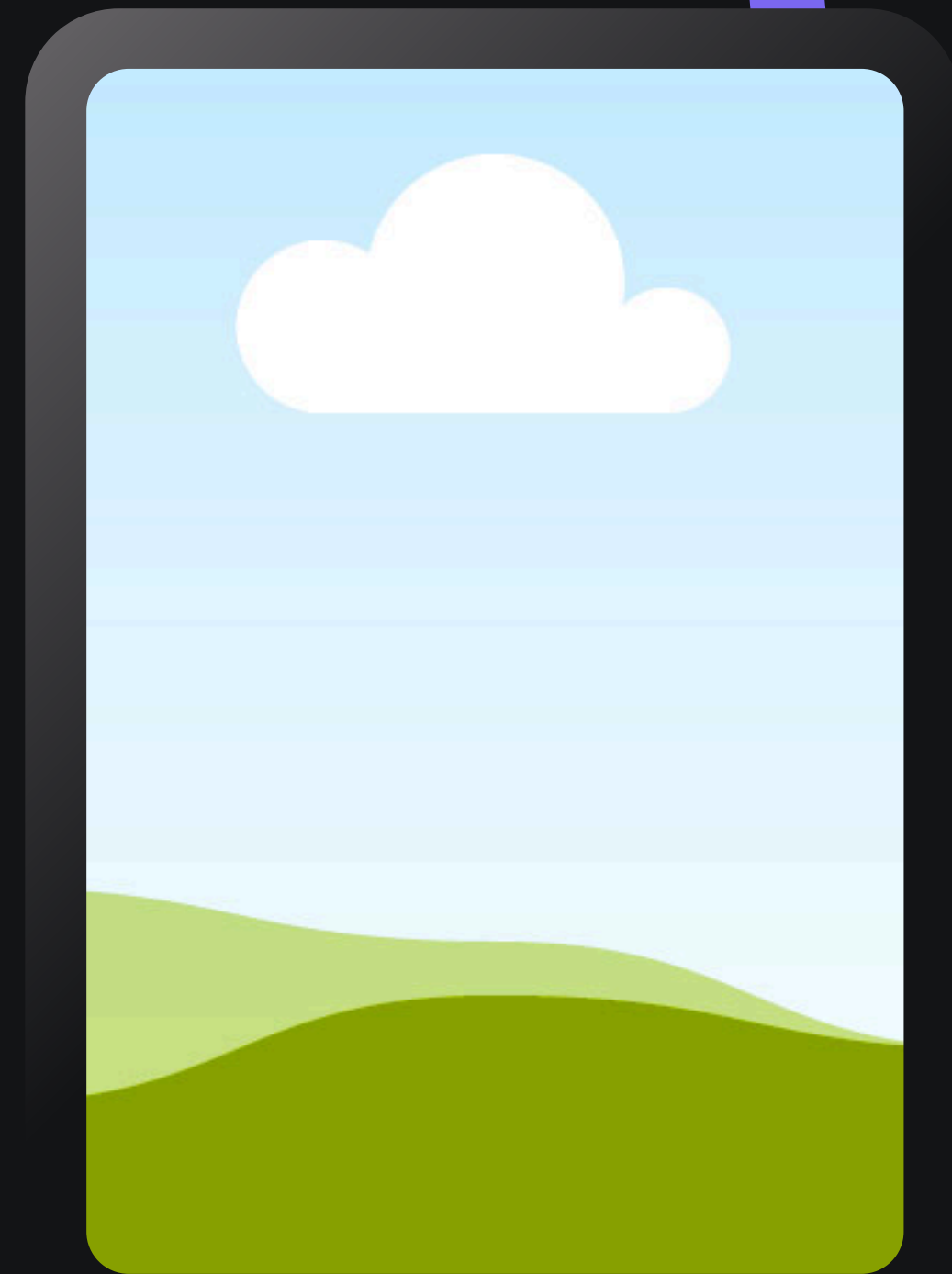
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Overall Data gathering and visualization

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

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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

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