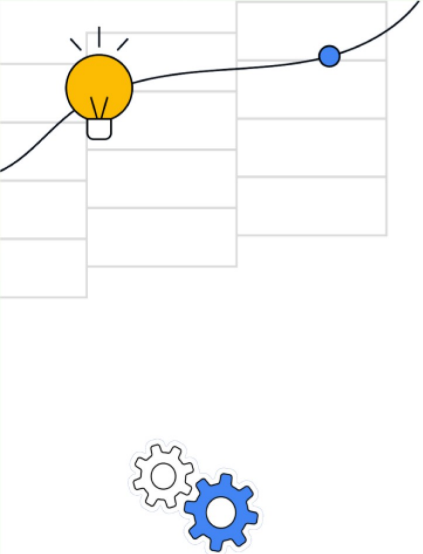




 Google Developer Groups



Powered by




Solution Challenge

AI for a better tomorrow



poco

Panic Attack Relief Call Service

Team name | Greenffindor Team leader | Kim hajin

Problem Statement |

Panic attacks occur without warning and can cause extreme distress, often **described as feeling like death**. In such moments, patients try to ease their anxiety by reaching out to friends or family for help. However, when **no one is available** or the attempt fails, **their anxiety worsens significantly**.

In fact, as of 2023, approximately **837,000 people** in South Korea suffer from panic disorder, and the number is **increasing by 10.1%** each year, making it a serious and growing public health issue.



Problem

A panic attack that feels like it's going to kill you

A panic attack occurs when the body's survival instincts are overly activated, reacting as if it's facing death.

Key Problems |

Social stigma & treatment gap

Although anxiety disorders are rising, many avoid treatment due to social perception.

Unreliable help calls

During a panic attack, people often call loved ones for comfort. but when those calls fail or go unanswered, their anxiety escalates further.

Faicing a Panic Attack Alone

Panic attacks peak in 10 minutes, but unclear need for medical help often leaves people to suffer alone.

Interview & Painpoints |

Baek Yi-jun (pseudonym)

Duration of illness | 18 years, from age 7 to now

Male 25 years old University student

In what situations do panic attacks occur?

When I can't go outside as I wish + when there's nothing around me (during the night to early morning hours)

Embarrassing

It's hard to seek help when it's late. So he has to bear the pain alone.

What methods do you practice to alleviate panic attacks?

Sometimes it gets better when I call someone close to me. If it doesn't work, my anxiety increases even more.

Seeking help often intensifies my anxiety.

He tried to get help but felt even more helpless and disappointed when I failed.

What emotions do people feel during a panic situation?

If I had to describe the emotions, I'd say it's a mix of feeling trapped, anxious, and angry—angry at the anxiety itself.

Left With the Negative

When a panic episode isn't recorded, the emotions remain unprocessed, leaving only the negative feelings to linger.

Brief about your solution

Calm panic with one emergency call.

Problem & Solution Mapping |

Panic attack onset → tap the call button → AI call provides calming guidance

One-tap AI Emergency Call

If a panic attack occurs during a call, you can make a call from anywhere, including the office.

Panic-Attacks-Overcome

Post-call, a seamless logging flow captures episode data and boosts confidence via a “Panic-Attacks-Overcome” counter on the home screen

Standardized Calming Technique Guidance

The AI persona delivers voice guidance for validated techniques like deep breathing and muscle relaxation, enabling immediate relief.

Value Proposition |



- AI calls help alleviate users' anxiety and assist in managing panic attacks on their own.
- Provides mental health support that is not restricted by time or location.
- Ensures anonymity and convenience for those unable to seek treatment due to social stigma.
- AI-powered mental health support services complement existing healthcare infrastructure.
- Mental health services address cost and geographical limitations.

Opportunities & Uniqueness

Own Panic Records Can Help Ease the Fear

Differentiators |

**Emergency AI Call Experience**

Unlike standalone alerts or text-based chatbots, one-tap voice call with an AI persona delivers immediate emotional support.

**Flow to Record Panic After a Call**

Poco helps users record their panic experience immediately after it's relieved through a call, enabling more accurate and detailed logging than other services.

**Self-Logged Recovery & Motivation**

Unlike other services, POCO lets users log detailed panic episodes themselves helping them better recognize and manage their condition.

USP |

Soothing call support that's easy for anyone to use, from kids to seniors

Predict potential panic triggers with insights from past episodes you've overcome.

How Will It Solve the Problem? |

Through an AI phone call, users can ease their panic and keep a record of their progress. Seeing past records of how their panic eased helps them feel less afraid when it happens again.



1. Panic attack onset



2. Tap the Phone Icon button



3. AI call provides calming guidance.



4. Panic Attack Logging



5. Home shows count of overcome panic attacks



6. Past panic records give me strength to face it again.

Features of Our Solution

POCO: Panic Attack Relief Call Service

**Overcome Panic Records**

View records of others who overcame panic attacks to gain the courage to face your own.

**Emergency AI Call**

Offers emotional support through characters and methods to ease panic.

**Flow for Recording Overcome Panic After a Call**

Since it's recorded after a panic attack, you can more accurately choose your current state.

**Detailed Panic Record Selection**

Choose the cause, photo, intensity, and symptoms of the panic to better understand your state.

**A character that encourages your panic records.**

A character that provides encouragement, easing the potentially gloomy atmosphere while recording your panic.

**A report to view the intensity and status of your panic**

A monthly report that shows common panic symptoms and intensity, helping you track your progress in managing them.

**Record of the conversation from the AI call.**

Transcribing your voice during the call to assist with future medical diagnoses.

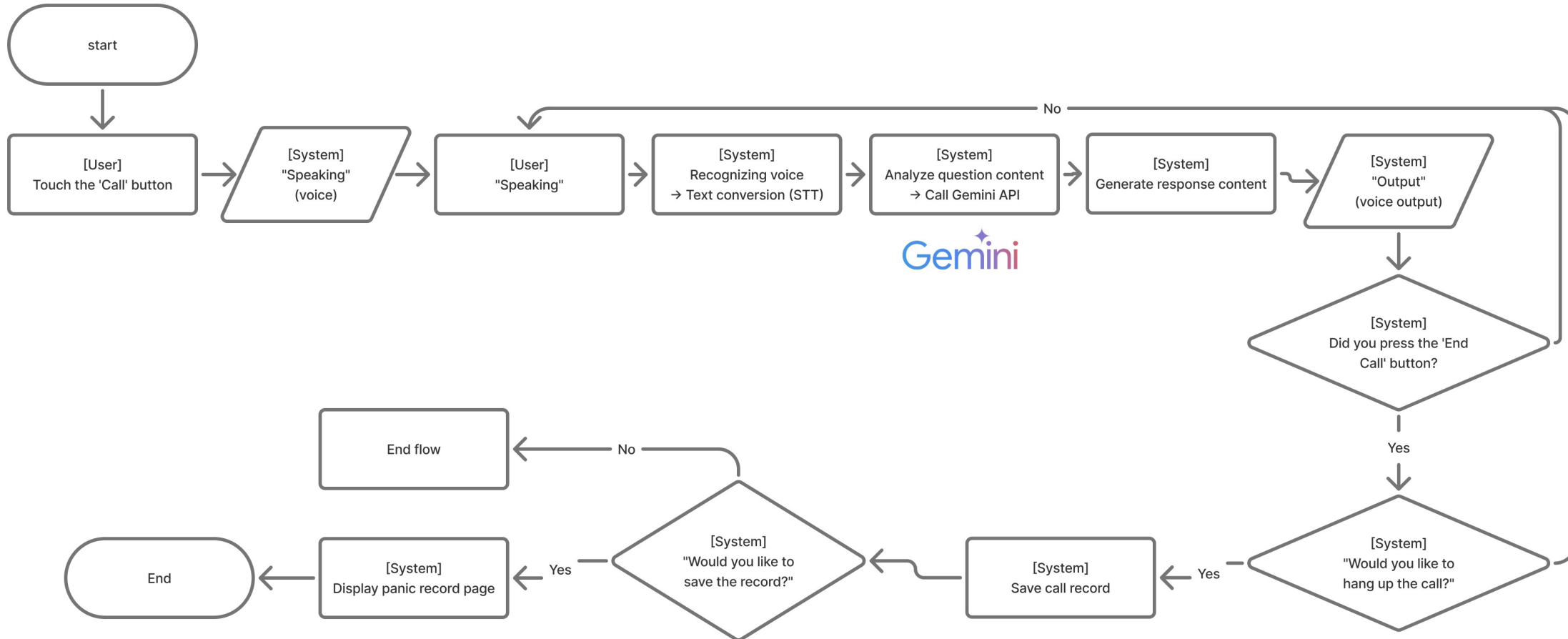
**Earn a trophy for recording your panic.**

A trophy is awarded for overcoming panic, empowering the user with the strength to face future challenges.

**With these features, our solution empowers users to take control over their panic episodes,
leading to better emotional wellbeing**

Flow diagram

Task: Using AI Calling During a Panic Attack

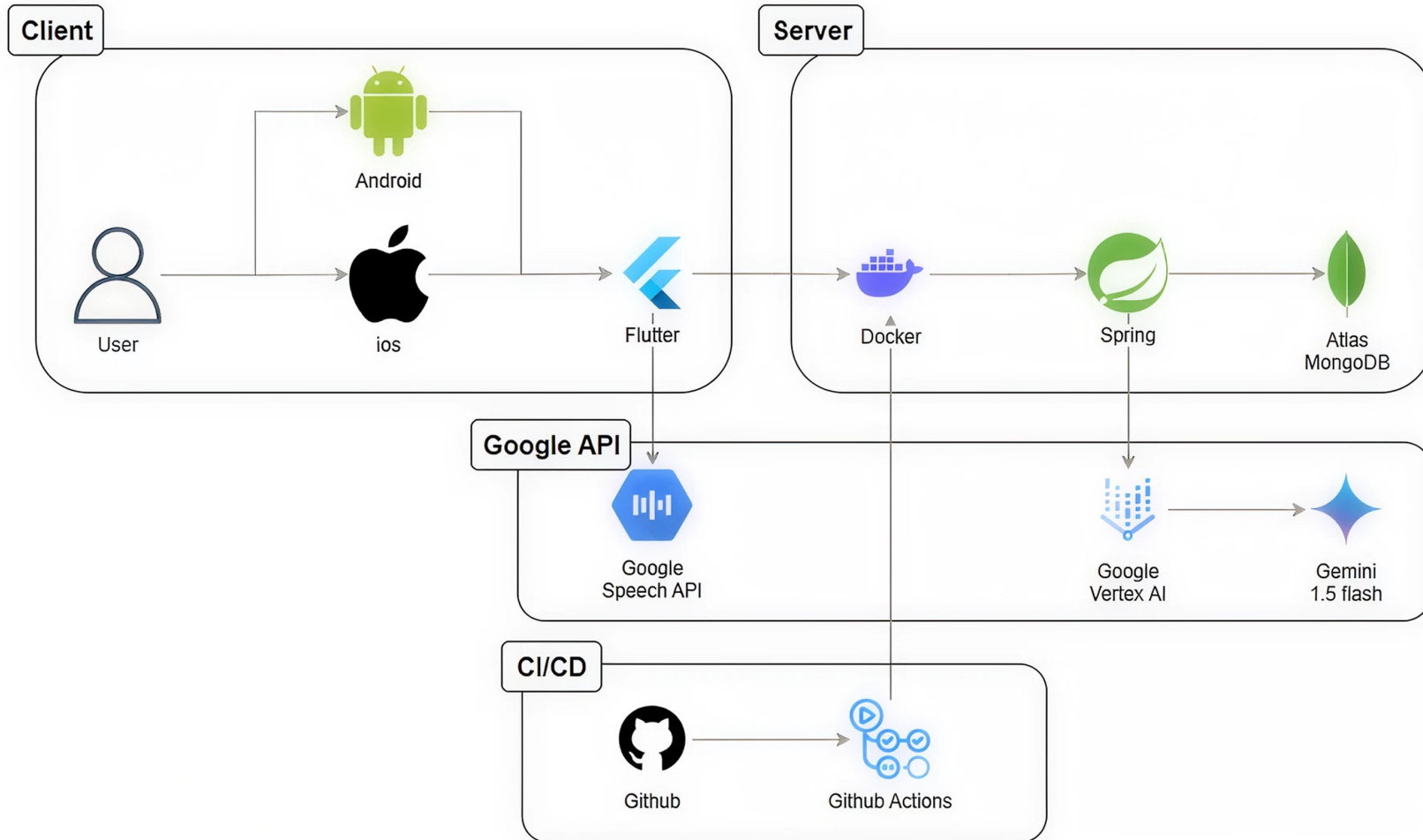


Mock diagram

When a panic attack occurs, the user can press the call button to talk to the AI, listen to calming techniques, and relieve their anxiety through communication.



Architecture diagram



Technologies Used in Our Solution

Our Tech Stack & Gemini Integration

Frontend**Flutter**

Dart



Google Cloud

Google Cloud AI

Speech-To-Text

Backend

Google Cloud

Google Cloud Vertex AI**Gemini 1.5 flash 001****WAS**

Java Spring Boot

database

MongoDB Atlas

CI/CD

Github Actions Docker

Update code changes to the server
by integrating with GitHub.**OS**Ubuntu Linux
Server**Gemini How Gemini API is Integrated****Sophisticated Emotion Recognition**

Analyzing the user's emotional expression to ask follow-up questions or provide appropriate support.

**Conversational Feedback**

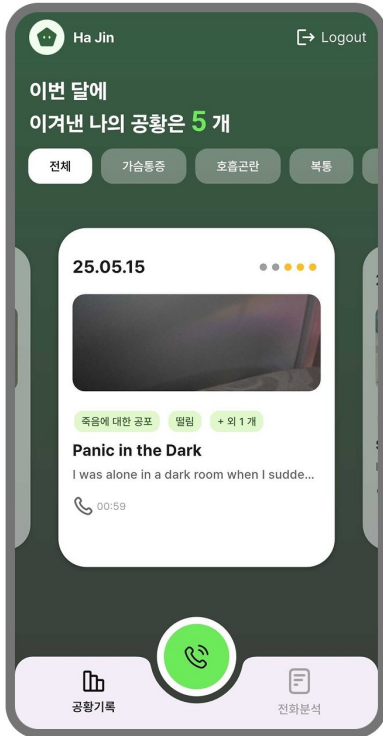
Offering relevant conversational feedback based on the user's responses.

**Psychological Support Role**

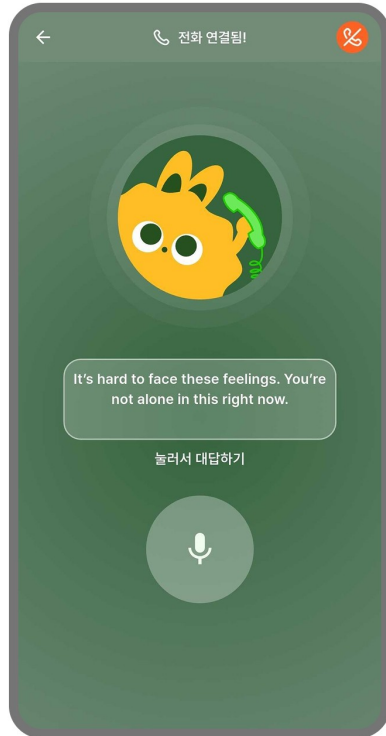
Guiding self-regulation through advice and helping the user take appropriate actions based on the situation.

Snapshots of the prototype

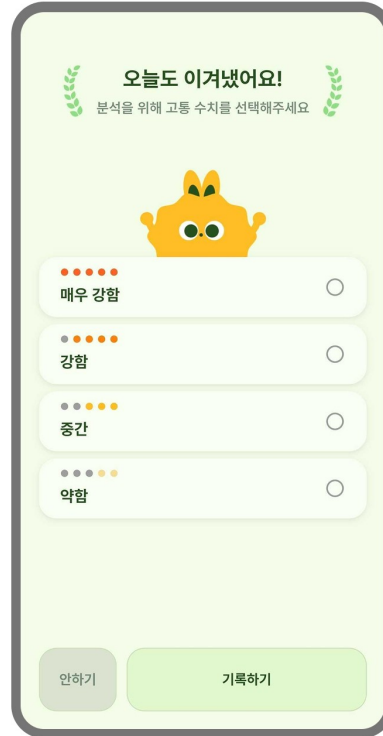
Home & Overcoming Panic Records



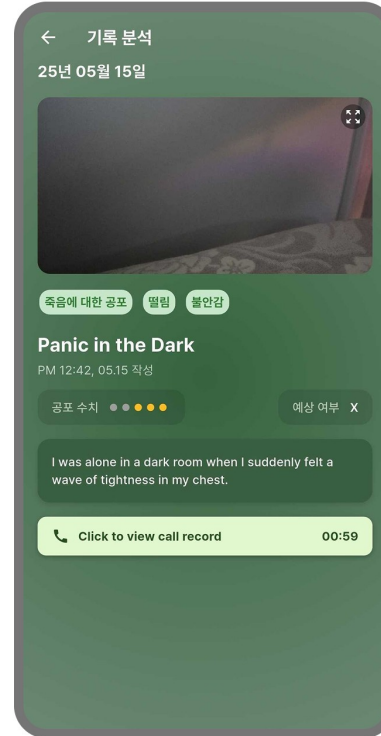
AI call Screen



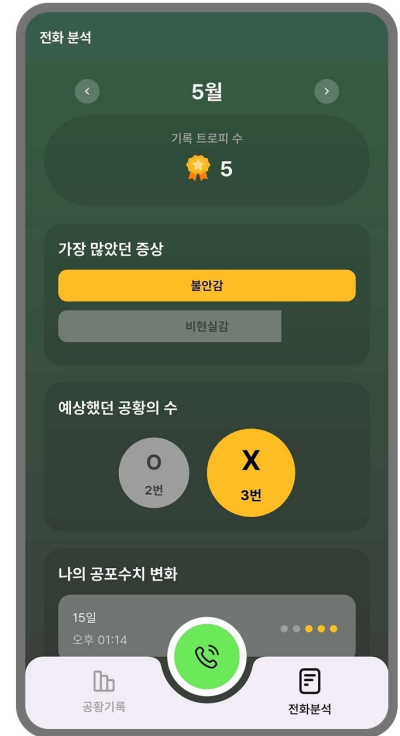
Panic Pain Intensity Record



Record Analysis & Call Contents



Panic Record Analysis and Trophy Count



This is the actual screen of the POCO service

Additional Details/Future Development

Connecting Panic Reports with Hospitals

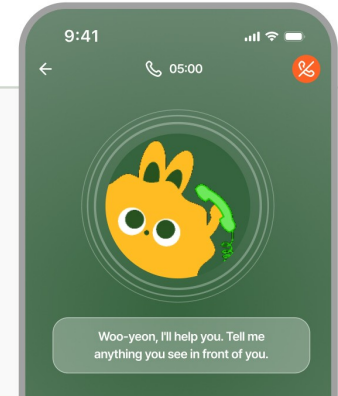
Additional Feature Ideas |

1 Find Nearby Hospitals

Provides hospital info and emergency call support via public APIs.

2 Automatic Call Summary

Summarizes key moments and words from the call on the panic record page.



Potential for Expansion |

Automatic PDF Report Generation

Generates a document of past records to support medical treatment.

Visualization of Symptom Changes

Visualizes the progression of symptoms through detailed graphs.

Shake to Activate

Ensures immediate access during a panic attack.

[Link to our service](#)

Experience a New Way to Overcome Panic



Demo video

Poco – Panic Attack Relief Call Service

https://youtu.be/yBWpN-qHgEc?si=r0_OaaxFlfC7KyWV



Prototype Link

Working Prototype Link

https://drive.google.com/drive/folders/1ElcqaU7cylp43x7dlcVvzZK_-TG8-kDd?usp=sharing