AegisSecure: AI-Powered Threat Detection App

Sprint 2 Report

Group Number: 35
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October 26, 2025

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Contents

Sprint Overview

Sprint Objective: Implement secure user registration and establish reliable email synchronization for spam/ham identification.
Duration (Planned): 22 September – 20 October
Time Spent (Actual): 22 September – 24 October

A short summary: During Sprint 2 the team focused on building a secure registration/authentication flow and integrating email fetching. Several implementation challenges were encountered (notably OAuth and SMS permissions), but a working Gmail integration and user auth flow were delivered as a proof-of-concept.

Sprint Backlog

Below are the Epics and User Stories planned for this sprint along with acceptance criteria and status.

Epic-2 : Secure User Registration

US-8: Secure User Registration

Front Card

As a new user, I want to register with email/phone and a strong password, so that I can securely access the app.

Back Card

Success:

- Registration validates unique email/phone and enforces password strength (min 8 chars, mix of types).
- Confirmation email/SMS sent with verification link.
- User profile created with default settings.

Failure:

- Duplicate accounts created.
- Weak passwords accepted.
- No verification step, leading to unconfirmed access.

Epic-3 : Input & Scanning

US-3: Manual Input

Front Card

As a user, I want to paste suspicious text, so that I can scan it manually.

Back Card

Success:

- Manual input accepted.
- Result shown within set time.

Failure:

- Empty text accepted.
- No response from the app.

US-4: SMS/Email Integration

Front Card

As a user, I want secure SMS/email integration, so that messages are scanned automatically if I give permission.

Back Card

Success:

- Email/SMS access granted with permission.

Failure:

- Email/SMS access granted without permission.
- Email/SMS access is not granted even with permission.
- Random selection/deselection of given permission.

US-5: Auto Scanning Service

Front Card

As a user, I want automatic scanning of new messages, so that I don't have to scan manually every time.

Back Card

Success:

- Background service scans instantly.
- Alerts triggered for suspicious text.
- The result is shown in notification with number and colour showing confidence level.

Failure:

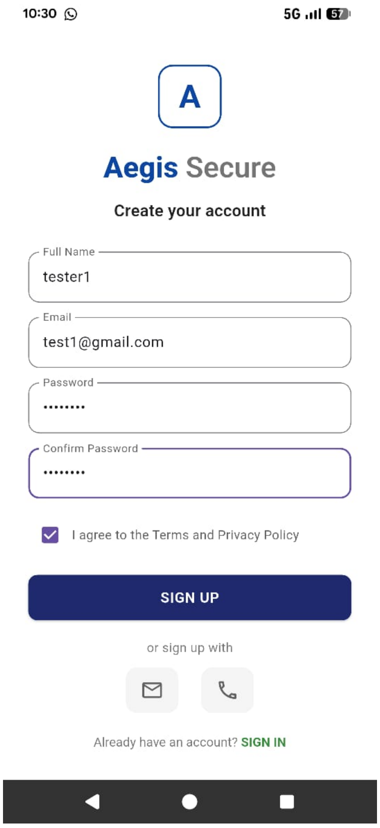
- Auto-scan not functioning properly.
- Alerts are not triggered.
- The result is not shown in notification with number and colour showing confidence level.

Sprint POC

What we delivered as part of Sprint 2:

User Authentication and Verification

Implemented the complete user registration, sign-in, and email verification flow, including sending and confirming a 6-digit OTP code.



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A

Aegis Secure

Create your account

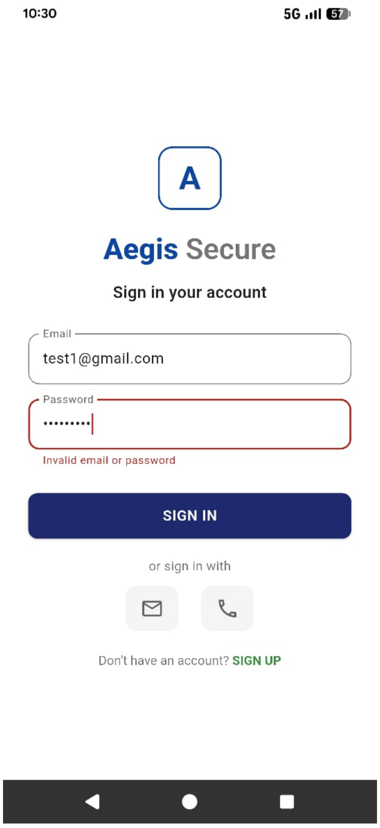
Full Name: tester1

Email: test1@gmail.com

Password: ••••••••

Confirm Password: ••••••••

☑ I agree to the Terms and Privacy Policy



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A

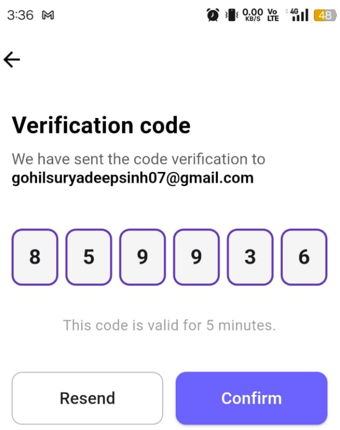
Aegis Secure

Sign in your account

Email: test1@gmail.com

Password: •••••••••

Invalid email or password



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Verification code

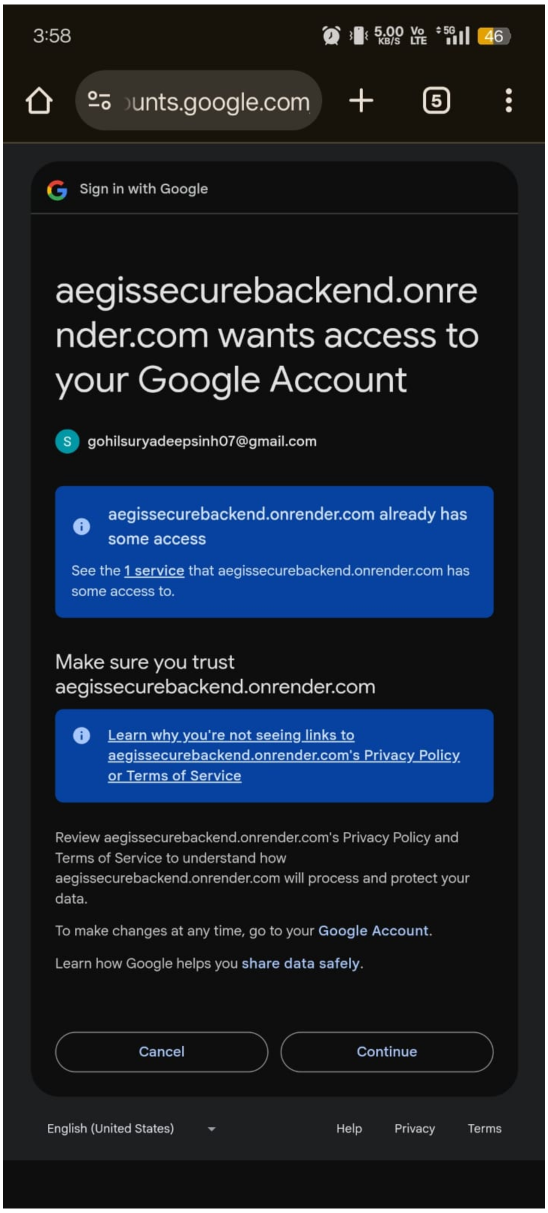
We have sent the code verification to **gohilsuryadeepsinh07@gmail.com**

8 5 9 9 3 6

This code is valid for 5 minutes.

Email Synchronization and Scoring

Successfully integrated Google OAuth for secure account access. The app fetches emails via the Gmail API and displays them in a custom inbox, showing the computed spam confidence score for each message.



aegissecurebackend.onrender.com wants access to your Google Account

gohilsuryadeepsinh07@gmail.com

aegissecurebackend.onrender.com already has some access

See the 1 service that aegissecurebackend.onrender.com has some access to.

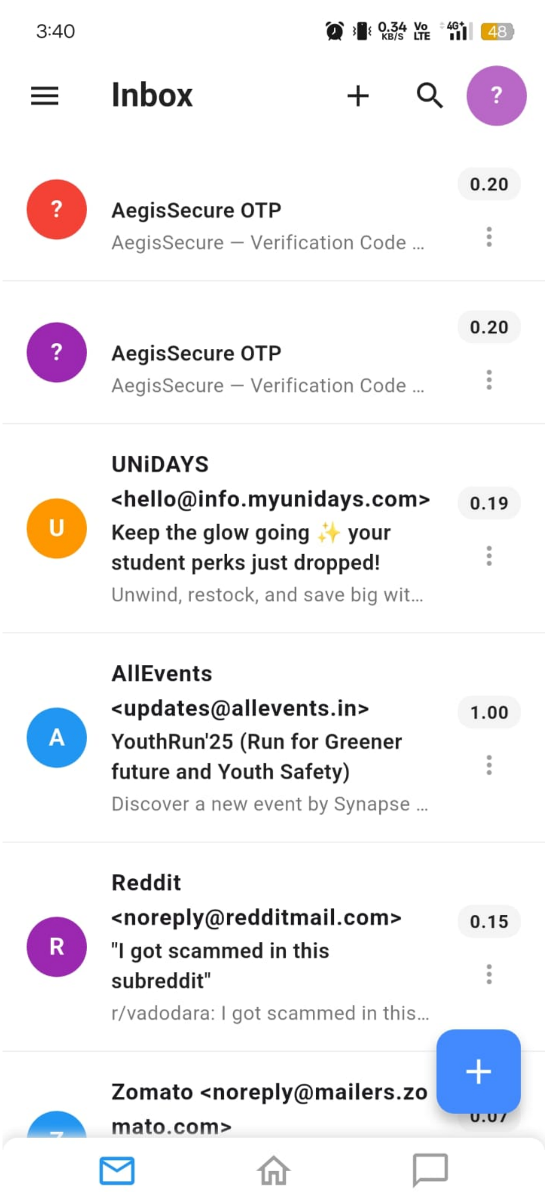
Make sure you trust aegissecurebackend.onrender.com

Learn why you're not seeing links to aegissecurebackend.onrender.com's Privacy Policy or Terms of Service

Review aegissecurebackend.onrender.com's Privacy Policy and Terms of Service to understand how aegissecurebackend.onrender.com will process and protect your data.

To make changes at any time, go to your Google Account.

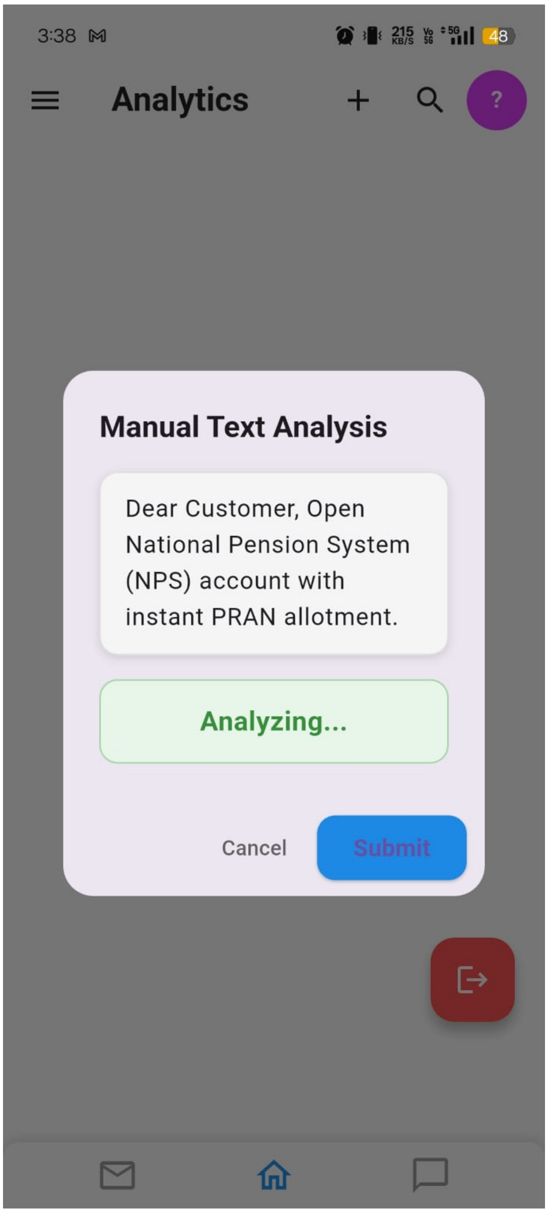
Learn how Google helps you share data safely.



?	AegisSecure OTP AegisSecure — Verification Code ...	0.20
?	AegisSecure OTP AegisSecure — Verification Code ...	0.20
U	UNiDAYS <hello@info.myunidays.com> Keep the glow going ✨ your student perks just dropped! Unwind, restock, and save big wit...	0.19
A	AllEvents <updates@allevents.in> YouthRun'25 (Run for Greener future and Youth Safety) Discover a new event by Synapse ...	1.00
R	Reddit <noreply@redditmail.com> "I got scammed in this subreddit" r/vadodara: I got scammed in this...	0.15
Z	Zomato <noreply@mailers.zomato.com>	0.07

Manual Text Analysis

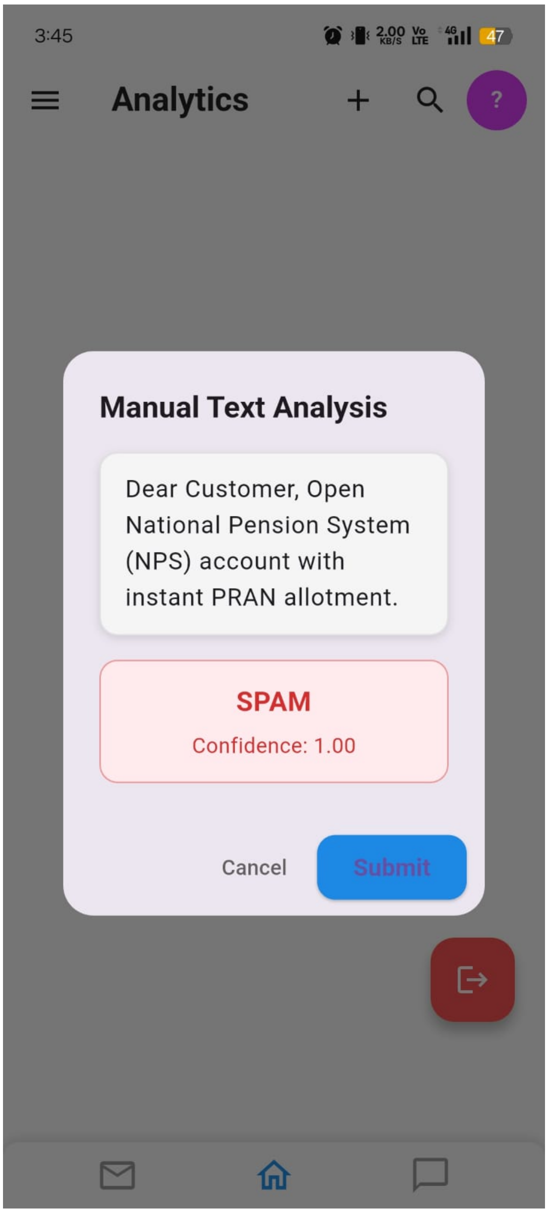
Developed a manual analysis feature where a user can paste any text. The app processes the text and returns a clear "SPAM" or "HAM" verdict along with a numerical confidence score.



Manual Text Analysis

Dear Customer, Open National Pension System (NPS) account with instant PRAN allotment.

Analyzing...



Manual Text Analysis

Dear Customer, Open National Pension System (NPS) account with instant PRAN allotment.

SPAM

Confidence: 1.00

Sprint Review

Overall, we successfully achieved the key targets set for this sprint, despite facing several major challenges during implementation.

User Registration & Authentication

We were able to fully implement the user registration and authentication module. New user details are now securely stored in our database, and the end-to-end registration flow is functioning as intended.

Email Fetching

This was the most critical part of our application since real-time email fetching is essential for spam/ham identification.

We encountered significant issues while establishing a working OAuth flow. Several major changes had to be made to ensure proper user authentication via Google and to enable seamless retrieval of emails.

After multiple iterations, we successfully integrated the Gmail API and are now able to fetch and display emails within our application in real time.

SMS Fetching

We attempted real-time SMS fetching; however, Android 10 and above restrict SMS read permissions for apps that are not set as the default SMS application.

After discussing with our mentor, we explored the possibility of using a third-party app or bot for SMS access. However, this approach also posed limitations in accessing real SMS content reliably.

Due to these constraints, we have temporarily paused SMS fetching and related development work until a feasible alternative is identified.

Team Progress

Since most of us are still developing our technical and development skills, the initial setup phase was challenging. Nevertheless, we managed to design and implement the core skeleton of the application and make substantial progress toward our sprint goals.

We are confident that, with the foundation now in place, we will be able to achieve most of the remaining targets in the upcoming sprints.

Next Sprint Plan (Sprint 3 preview)

Planned focus areas for the next sprint:

- Finish auto-scanning background service and notification UX (US-5).
- Harden manual input scanning and response performance (US-3).
- Research and decide on SMS access strategy; if feasible, implement a guarded SMS fetcher (US-4).
- Add end-to-end tests for registration and email fetching pipelines.

Conclusion

Sprint 2 accomplished the most critical objectives: a secure registration/authentication flow and a working Gmail integration with per-email confidence scoring. Although SMS fetching and some background service polish remain, the team now has a solid foundation to accelerate feature-complete delivery in the upcoming sprints.