

AegisSecure: AI-Powered Threat Detection App

Sprint 3 Report

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November 19, 2025



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Contents

Sprint Overview	3
Sprint Backlog	3
Sprint 3 - New Work	3
Sprint 3 - Carry-over Work	6
Sprint POC	7
Sprint Review	11
Next Sprint Plan	12
Conclusion	12

Sprint Overview

Sprint Objective: Implement core result visualization dashboards (dashboard, history), integrate the advanced accuracy detection model, and complete the SMS/Email scanning functionality from Sprint 2.

Duration (Planned): 25 October – 7 November

Time Spent (Actual): 25 October – 10 November

A short summary: During Sprint 3, the team focused on building the primary user-facing visualization features (Dashboard, History) and integrating advanced detection models. We successfully integrated high-accuracy scoring (US-15) and an initial support of Multilingual Analysis (US-10). This sprint also successfully resolved the SMS integration challenges from Sprint 2, delivering a complete end-to-end scanning pipeline for both Email and SMS.

Sprint Backlog

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

Sprint 3 - New Work

Epic-4 : Result Visualization & Simplicity

US-2: Result Dashboard

Front Card

As a user, I want a simple dashboard, so that I can easily understand my scan results.

Back Card

Success:

- Dashboard shows scan results clearly.
- Threats categorized by risk level.
- Display confidence score (0-100).

Failure:

- Dashboard confusing/empty.
- Wrong or missing scan result.

US-11: Summary Screen with History

Front Card

As a user, I want a pie chart showing classification of messages and history of messages, so that I can track my safety over time.

Back Card

Success:

- History visible with timestamps.
- Summary pie chart shows the classification of messages.

Failure:

- History missing.
- Pie chart shows wrong classification of messages.
- No history or pie chart is visible.

US-17: Simplicity & Accessibility

Front Card

As a non-technical user, I want the app to be simple, so that I can understand it easily.

Back Card

Success:

- UI simple & intuitive.
- Explanations in plain language.

Failure:

- Complicated terms shown.
- Confusing UI flow.

Epic-5 : Advanced Detection Quality

US-10: Multilingual Analysis

Front Card

As a user, I want the different language messages analysed, so that I can detect scams regardless of language.

Back Card

Success:

- Different language messages were scanned.
- Correct scan result provided across all languages.

Status: Implemented. Basic translation and scanning logic is in place, though accuracy varies compared to English.

US-15: Accuracy

Front Card

As a user, I want accurate detection, so that false alarms are minimized.

Back Card

Success:

- NLP model confidence more than some threshold on known scams.
- Few false positives/negatives.

Failure:

- Many safe texts flagged wrongly.
- Scams missed repeatedly.

Sprint 3 - Carry-over Work

The following user stories were incomplete at the end of Sprint 2. The primary blocker was the SMS integration. This work was carried over into Sprint 3 and has now been completed.

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

Status: **COMPLETED.** (Work to "harden performance" from Sprint 2 is finished).

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

Status: **COMPLETED.** (The SMS fetching strategy was finalized and implemented, resolving the Sprint 2 blocker).

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

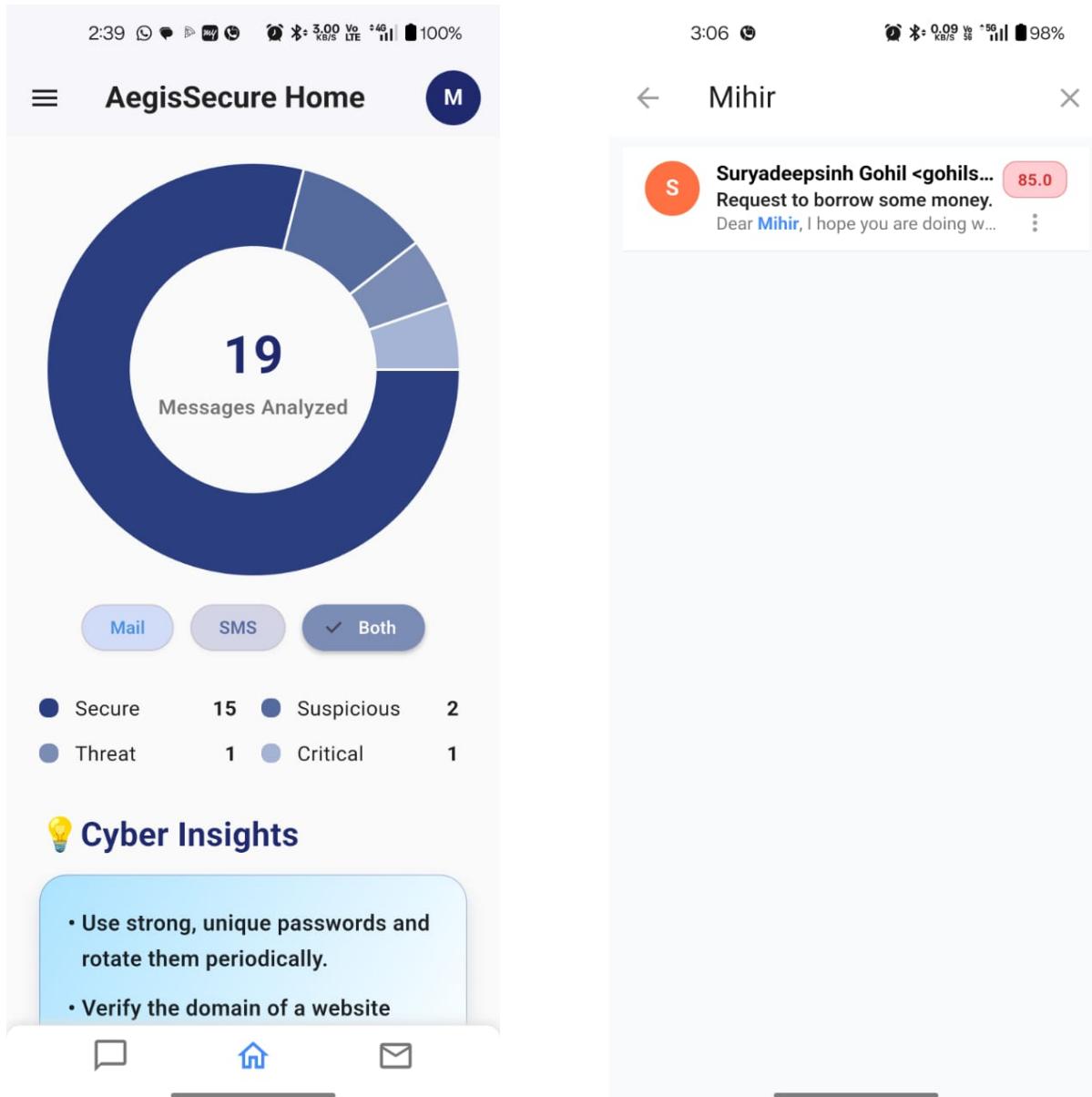
Status: **COMPLETED.** (The background service and notification UX are now finished and functional for both Email and SMS).

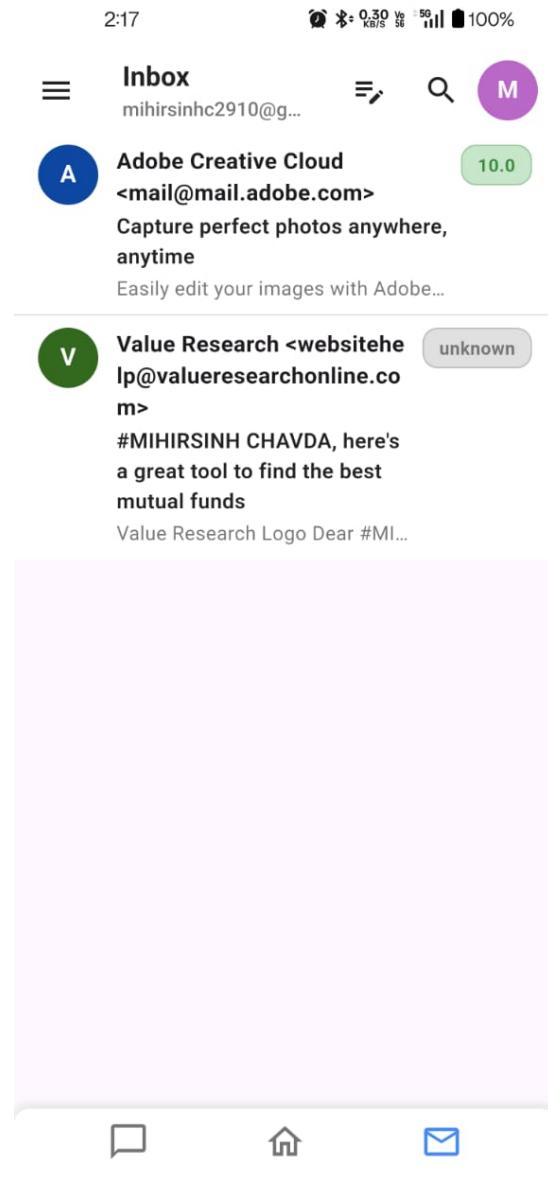
Sprint POC

What we delivered as part of Sprint 3:

Summary Screen and Dashboards (US-11, US-2)

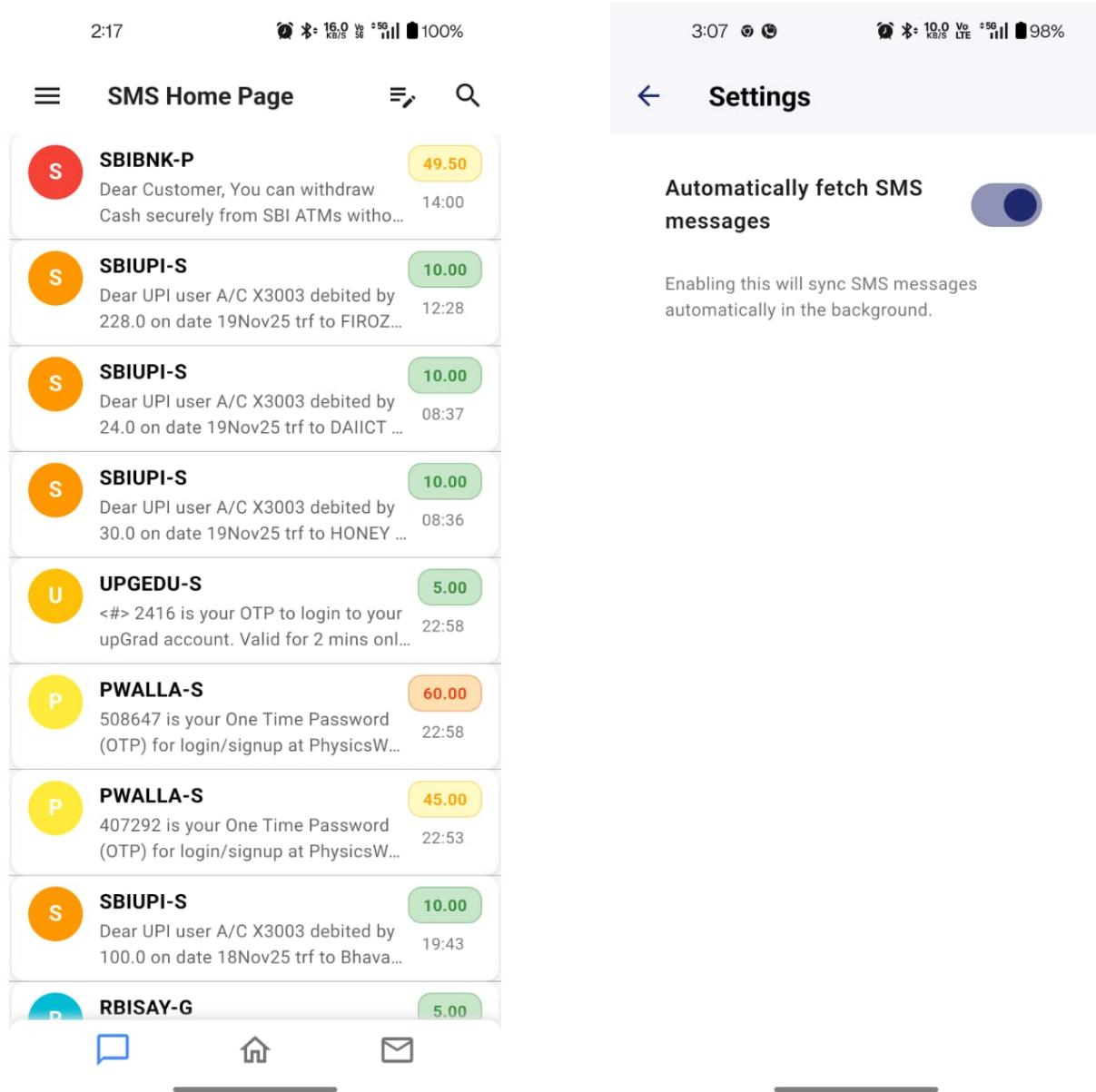
We implemented the "AegisSecure Home" summary screen (US-11), featuring a dynamic pie chart that classifies all analyzed messages (Secure vs. Threat). We also enhanced the dashboard lists with search functionality (US-2), allowing users to quickly find specific scan results.





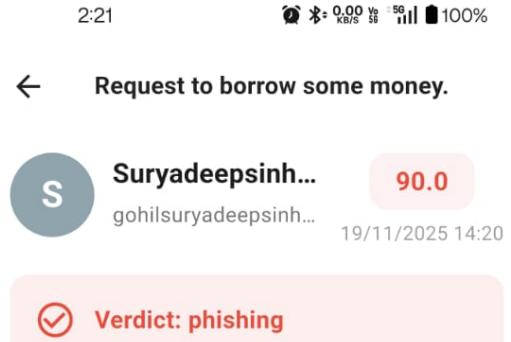
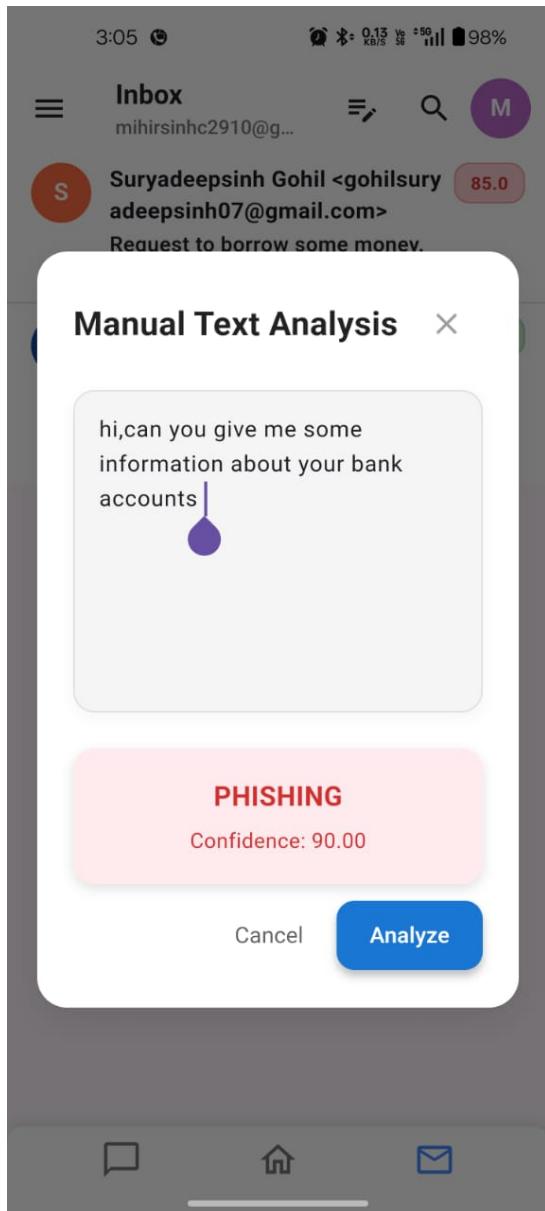
SMS Integration and Permissions (US-4, US-5)

We successfully completed the SMS scanning pipeline. Crucially, we added a dedicated setting (shown below) to allow users to toggle "Automatically fetch SMS messages," satisfying the permission requirement of US-4. The SMS Homepage displays the fetched messages with their calculated risk scores.



Advanced Detection & Manual Analysis (US-15, US-3)

We integrated the high-accuracy model (US-15) into both the automatic flow and the manual input feature. The "Manual Text Analysis" (US-3) now provides an instant "Phishing" or "Safe" verdict with a confidence score, as shown in the popup below.



Reasoning

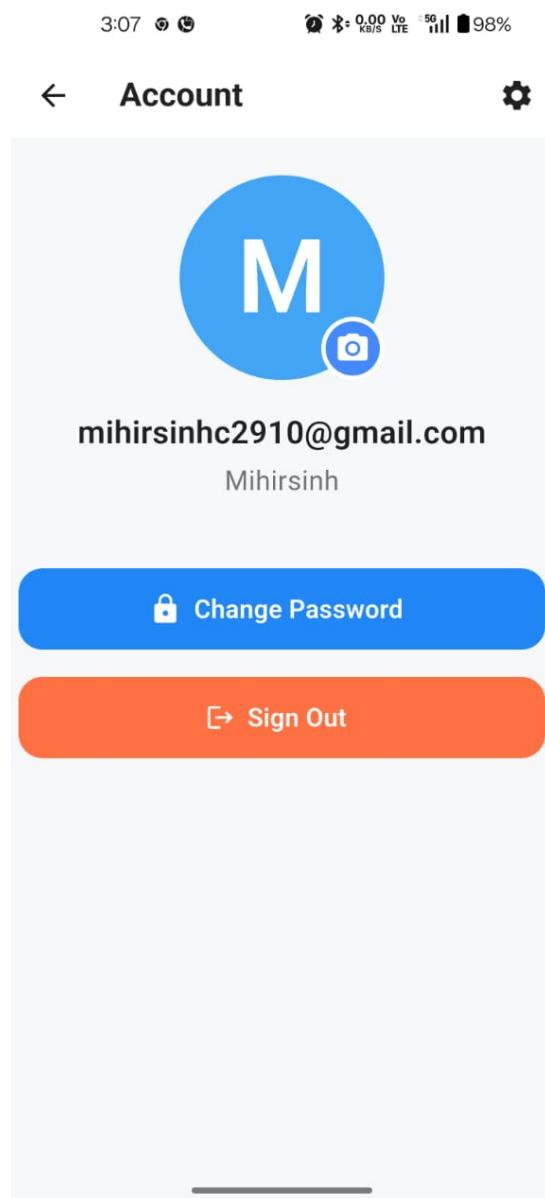
This message is likely phishing. The sender, Suryadeepsinh Gohil, is using a generic Gmail address, not a professional or verified address. The message requests money urgently, which is a common tactic in phishing scams. The request is to send money via PayTM using a UPI ID, which could potentially be a phishing attempt to steal financial information.

Suggestion

Do not send any money. This is likely a phishing attempt to steal your financial information. Verify the sender's identity

User Account Management

We polished the User Account interface, allowing users to view their profile details and manage their session security.



Sprint Review

Overall, Sprint 3 successfully delivered the core user-facing visualization features and completed the full scanning pipeline by resolving the Sprint 2 blockers.

Result Visualization & Simplicity (Epic 4)

We successfully implemented the Result Dashboard (US-2) and Summary Screen (US-11). We also refactored the UI to be simpler (US-17), improving accessibility.

Advanced Detection Quality (Epic 5)

The team made significant strides in detection capabilities. We successfully integrated the high-accuracy model (US-15), which provides reliable confidence scores for English text.

We also implemented an initial version of Multilingual Analysis (US-10). While the system can now accept and process non-English inputs, our testing shows that accuracy is currently

variable and not yet on par with the primary English model. We have included this as a "Beta" feature for this release, noting that false positives/negatives are more likely in other languages.

Carry-over Work (Epics 2 & 3)

This was a major focus. We successfully implemented a new strategy for SMS fetching (US-4), resolving the Android permission issues that blocked us in Sprint 2. The Auto-Scanning Service (US-5) is now fully functional for both email and SMS.

Team Progress

With the core backend and UI framework now complete, the team's velocity has increased. We've become proficient in resolving complex integration challenges and can now focus on polishing the user experience.

Next Sprint Plan (Sprint 4 preview)

Planned focus areas for the next sprint (Sprint 4):

- **Epic 6 (Performance):** Address performance NFRs (US-16).
- **Epic 7 (Feedback):** Implement the user feedback loop (US-6).
- **Epic 8 (Personalization):** Implement Push Notifications (US-7), Settings & Account (US-9), and Multilingual App UI (US-12).
- **Epic 9 (Security):** Implement Privacy (US-13) and Secure Connections (US-14) NFRs.

Conclusion

Sprint 3 successfully delivered the core user-facing dashboards (Epic 4) and a robust detection engine capable of high-accuracy and experimental multilingual analysis (Epic 5). By also completing the complex SMS integration (Epic 3), the app is now feature-complete in its scanning pipeline. The team is now in a strong position to focus on the remaining Sprint 4 goals.