



LabSync AI

Telegram-Based Lab Automation System

PRESENTED BY:

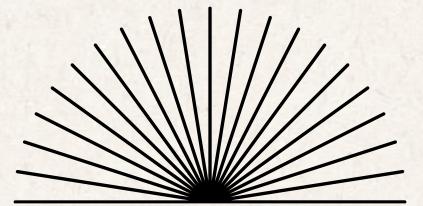
Saad Tahir 2023-CS-62
Inshal Shafiq 2023-CS-155
Zohaib Ali 2023-CS-181

TEAM NAME:

Logic Force

PRESENTED TO:

Dr Syed Khaldoon Khurshid



Scope & Goal



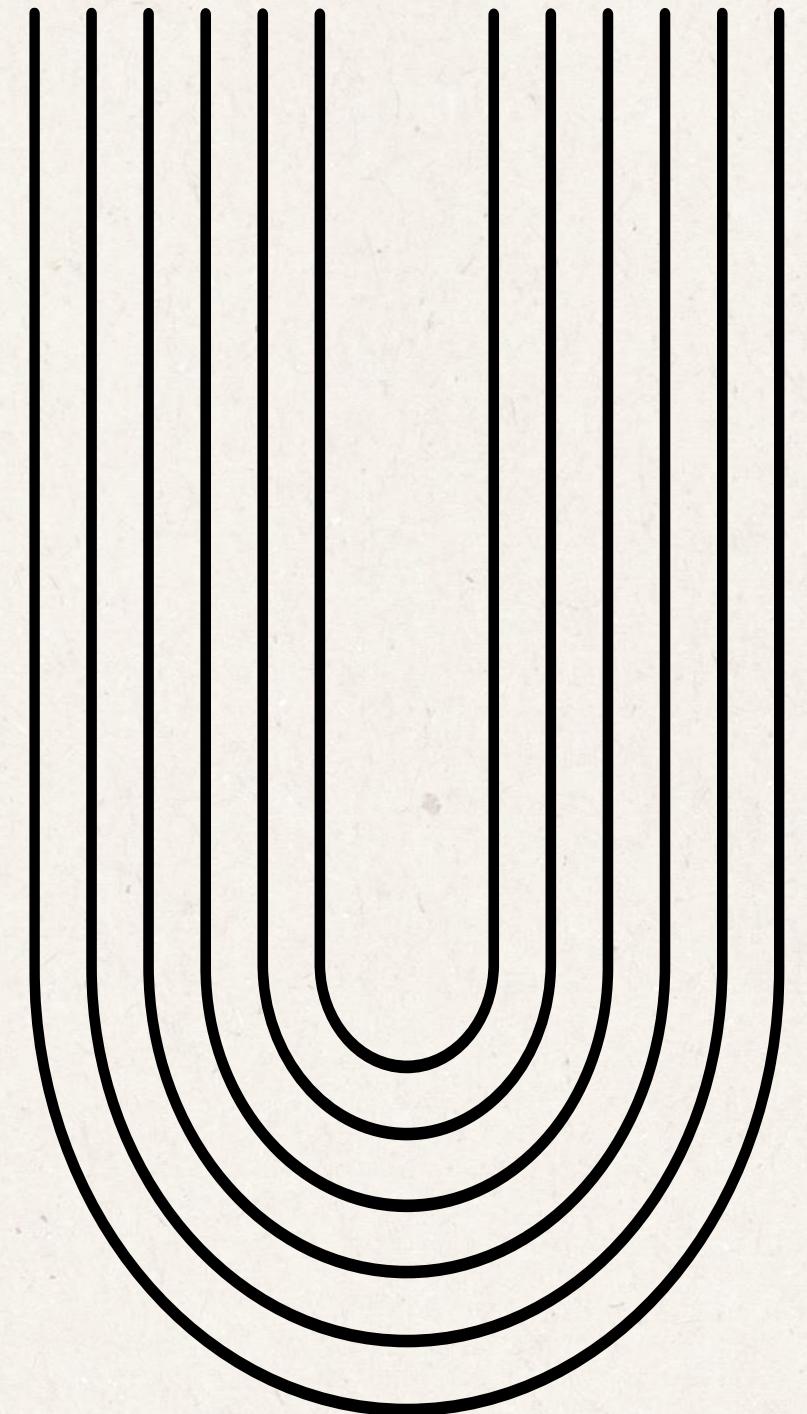
Scope

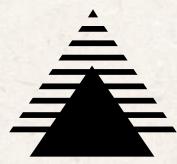
Automates scheduling and notification tasks by detecting meeting details from Telegram messages and updating the user's calendar and dashboard.



Goal

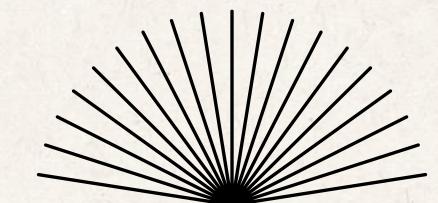
To reduce manual coordination in healthcare R&D labs by enabling AI-driven message parsing, event creation, and reminder management.





PMI KICKOFF Badges

Our team successfully achieved PMI Kickoff
Predictive and Agile badges





Talent & Skills Sheet

PMI Kickoff

kickoff.pmi.org

Talent & Skills Spreadsheet

Project Name:

LabSync AI

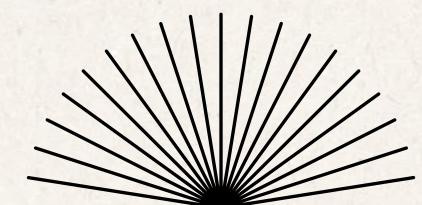
Project Manager:

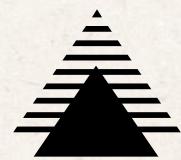
Saad Tahir

Key

1	No Current Competency
2	Partial Competency
3	Good Competency
4	Advanced Competency

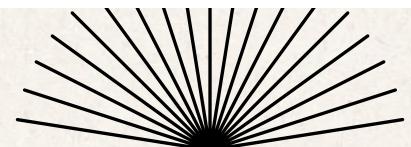
Skill Needed	Team Member Name	Roll Number	Years of Experience	Proficiency
Project Management	Saad Tahir	2023-CS-62	1	3
Frontend Developer	Inshal Shafiq	2023-CS-155	2	3
Backend Developer	Zohaib Ali	2023-CS-181	1	2

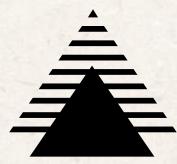




Role Mapping in Excel

Week	Sprint Focus & Milestone	Saad (CS-62) Role & Tasks	Inshal (CS-155) Role & Tasks	Zohaib (CS-181) Role & Tasks
1 (Setup & Telegram Bot Basics)	Refine stories; basic bot echoes messages. Milestone: Bot receives/replies in test group. ~8-10 hours	Scrum Master - Lead stand-ups & Notion setup (backlog/tasks). - Resolve blockers (e.g., env install). - End-week review/demo to PO.	Frontend Dev - Design bot UI (welcome screen, reply formats). - Wireframe dashboard (Figma for event previews). - Test mobile responsiveness.	Backend Dev - Code echo bot (python-telegram-bot). - Set up .env/polling; basic /start command. - Commit & test with sample messages.
2 (Parsing Dates/Events)	Add date/deadline detection; classify events. Milestone: Bot parses & replies with info. ~10-12 hours	Backend Dev - Implement parser (datefinder + regex/keywords). - Handle relative dates (dateutil). - Log to JSON; test 10 samples.	Scrum Master - Lead stand-ups & Notion burndown updates. - Facilitate parser UI feedback. - Sprint review (accuracy >70%).	Frontend Dev - Build bot reply UI (formatted msgs, confirm buttons). - Integrate parsed display (inline keyboards). - UI tests for lab/mobile use.
3 (Calendar Integration)	Set up API; create events with reminders. Milestone: Script creates event from input. ~8-10 hours	Frontend Dev - Design confirm UI (Telegram buttons for add/edit). - Mockup event preview pane. - Integrate with bot replies.	Backend Dev - Code Calendar API (OAuth, event creation). - Add sync logic & reminders (30-min popup). - Error handling; test samples.	Scrum Master - Lead stand-ups & Notion retrospective. - Remove blockers (e.g., auth). - PO review on event format.
4 (Full Integration & UI Polish)	Wire all components; add dashboard. Milestone: End-to-end: Msg → parsed event in calendar. ~8-10 hours	Scrum Master - Lead stand-ups & Notion sprint report. - Simulate user tests/feedback. - Full demo prep.	Frontend Dev - Build dashboard (Streamlit: View/sync events). - Polish bot confirmations (keyboards). - Connect UI to JSON data.	Backend Dev - Integrate bot → parse → calendar. - Add async/logging; multi-event support. - Security checks (.env, group access).
5 (Testing, Docs & Demo)	Tests; user feedback; docs. Milestone: Polished prototype demo. ~6-8 hours	Backend Dev - Run tests (pytest for parser/calendar). - Fix backend bugs (e.g., timezones). - Update code for demo.	Scrum Master - Lead stand-ups & final retrospective. - Coordinate tests with PO. - Demo coordination/slides.	Frontend Dev - Test UI flows (mobile confirms). - Polish dashboard visuals (icons). - UI bug fixes from tests.





Role Mapping in Notion

The screenshot shows a Notion workspace titled "LabSync AI". The left sidebar includes sections for "Saad Tahir", "Search", "Home", "Notion AI", "Inbox", "Teamsplaces", "Logic Force", and "LabSync AI" (which is selected). The main content area displays the title "LabSync AI" and a brief description: "An AI assistant that reads incoming Telegram messages, extracts meeting details, and automatically updates the user's calendar and dashboard with reminders". Below this is a "Role-Tasks" table:

Sprints	Milestone	Assignee	Description
1	Team & Tool Setup	Saad Tahir	Scrum Master - Facilitate project kickoff meeting. Document team working agreement. Set up Notion with Product Backlog
2	Basic Bot Interaction	Backend Dev	Implement basic /start and /help commands. Code core "echo" functionality. Set up logging and basic
3	Core Parser Implementation	Scrum Master	Lead stand-ups. Help break down parsing logic into testable subtasks. Organize end-of-week parser logic
4	Robust Parsing & Interactive UI	Backend Dev	Enhance parser with dateutil for relative dates ("next Monday"). Improve event title extraction using rege
5	Calendar Authentication & Basics	Frontend Dev	Design and implement the OAuth consent flow mockup in the dashboard. Add a "Connect Calendar" sectio
6	Core Calendar Integration	Scrum Master	Lead stand-ups. Create test scenarios for event creation (success/failure). Update project risks and block
7	Bot -> Calendar Flow	Backend Dev	Wire the bot's parsed output directly into the calendar creation function. Implement state management to h
8	Stable & Polished Prototype	Backend Dev	Write and run pytest units tests for parser and calendar modules. Fix bugs related to timezones, all-day even
9	Project Handover	Scrum Master	Lead final project retrospective. Prepare the final demo presentation. Ensure all project documentation.

At the bottom left, there is a "Invite members" button with the text "Collaborate with your team." The bottom navigation bar includes icons for file, search, and help.

Kanban Board in Notion

The screenshot shows a Notion workspace titled "LabSync AI". The left sidebar contains a navigation menu with items like "Search", "Home", "Notion AI", "Inbox", "Teamspaces", "Logic Force", and "LabSync AI" (which is selected). Below the sidebar, there's a "Private" section with "Add new" options for "Settings", "Marketplace", and "Trash". At the bottom, there's an "Invite members" button and a footer with icons for "15", "New", and "?".

The main content area features a large title "LabSync AI" and a subtitle: "An AI assistant that reads incoming Telegram messages, extracts meeting details, and automatically updates the user's calendar and dashboard with reminders". Below this, there's a Kanban board interface with three columns: "ToDo" (3 items), "In Progress" (1 item), and "Done" (3 items).

- ToDo:**
 - Create wireframes of telegram bot (inshalshafique285@gmail.com)
 - telegram backend bot setup (Zohaib Ahmed)
 - Task
- In Progress:**
 - setup frontend streamlit (inshalshafique285@gmail.com)
- Done:**
 - Github repo setup (Saad Tahir)
 - setup kanban board in notion workspace (Saad Tahir)
 - assign role-task mapping (Saad Tahir)

At the bottom right of the board, there's a small circular icon with a stylized character and a sunburst graphic.

Backlog items in Notion

The screenshot shows a Notion page titled "LabSync AI". The page has a dark theme and displays a backlog view with three main columns:

- Epic**:
 - bot setup
 - message handling
 - NLP for event detection
 - Connect and manage calendar events
- User Stories**:
 - As a student, I want to send a natural language message about an event, So that the bot can automatically detect the date, time, and event details
 - As a new user, I want to start a conversation with the bot and see a welcome message, So that I understand what the bot can do and how to use it
 - As a user, I want to confirm and add detected events to my calendar, So that I don't have to manually create calendar entries
- Backlog items**:
 - Implement /start command handler
 - Create welcome message content
 - Integrate datefinder library for date detection
 - Create JSON schema for parsed event data
 - Implement Google Calendar OAuth authentication
 - Add confirmation buttons in bot replies

The sidebar on the left shows the team space "Logic Force" and the page "LabSync AI" is selected. The bottom right corner features a small circular icon with a cat logo.

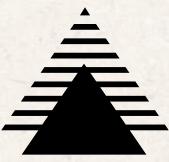


Table view in Notion

LabSync AI

Edited just now Share ⭐ ...

LabSync AI

An AI assistant that reads incoming Telegram messages, extracts meeting details, and automatically updates the user's calendar and dashboard with reminders

Kanban board Backlog Table view Role-Tasks Timeline New

Task	Status	Priority	Assign	Deadline
NLP for event detection	Epics			
message handling	Epics			
bot setup	Epics			
Create wireframes of telegram bot	ToDo	Low	inshalshafique285@gmail.com	
Task	ToDo			
telegram backend bot setup	ToDo	High	Zohaib Ahmed	
As a student, I want to send a natural language message	User Stories			
As a new user, I want to start a conversation with the bot	User Stories			
setup frontend streamlit	In progress	Medium	inshalshafique285@gmail.com	
Create welcome message content	Backlog items			
Implement /start command handler	Backlog items			
Github repo setup	Done	High	Saad Tahir	September 27, 2023
assign role-task mapping	Done	Medium	Saad Tahir	September 30, 2023
setup kanban board in notion workspace	Done	Medium	Saad Tahir	September 30, 2023

Invite members Collaborate with your team.

New page

Generic Backlog in Trello

The image shows a Trello board titled "Generic Backlog". The board has three main lists:

- Epics**:
 - Telegram Bot Setup
 - Frontend Wireframes
 - Message Handling
 - Calendar Automation
 - Dashboard Management
 - Notifications & Reminders
- User Stories**:
 - 5 points**
As a lab researcher, I want to connect my Telegram account with the LabSync system so I can receive meeting and deadline updates automatically.
 - 8 points**
As a researcher, I want the system to detect dates, times, and meeting keywords from messages so that events can be created automatically.
 - 8 points**
As a researcher, I want the system to add extracted events into my Google Calendar so I can track all meetings automatically.
 - 5 points**
As a user, I want a simple web dashboard to view upcoming events and deadlines synced from my calendar.
 - 8 points**
As a researcher, I want to receive Telegram notifications
- Tasks**:
 - Create Telegram Bot and get API token
 - Connect Telegram Webhook to backend
 - Store incoming messages in database
 - Test message reception and storage
 - Implement regex text extraction
 - Add NLP library for context detection
 - Test extraction accuracy with sample messages
 - Save parsed data (title, date, time) to DB

At the bottom of the board, there are navigation links: "Inbox", "Planner", "Board" (which is highlighted), and "Switch boards".

▲ Sprint Backlog in Trello

Sprint Tasks 00

Sprint 1 Goal

Foundation & Basic Bot

+ Add a card

Backlog

Backlog

3 points Implement /start command handler

+ Add a card

Doing

Doing

5 points Set up basic bot authentication

+ Add a card

Done

Done

1 point Create welcome message content

+ Add a card

Sprint 2 Goal

Event Parsing

+ Add a card

Backlog

Backlog

5 points Integrate datefinder library for date detection

+ Add a card

Doing

Doing

3 points Build keyword classifier for event types

+ Add a card

Done

Done

3 points Create JSON schema for parsed data

+ Add a card

Inbox Planner Board Switch boards

LabSync
AI-Powered Email & Calendar



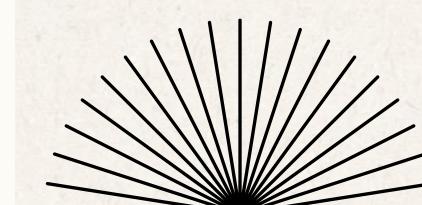
Sprint Schedule

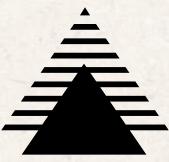
 Kickoff

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Sprint Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
Sprint Planning	Telegram Bot	Telegram Webhook	Messages in Database	Testing
Daily Standup	Velocity Review	GitHub Push	Project Overview	Sprint Review
				Sprint Retrospective
Sprint Planning	Standup review	Regex Text Extraction	Parsed Data into DB	Testing
Standup Meeting	Extraction Accuracy	Testing	Progress Update	Sprint Review
				Sprint Retrospective





Sprint Review

Kickoff

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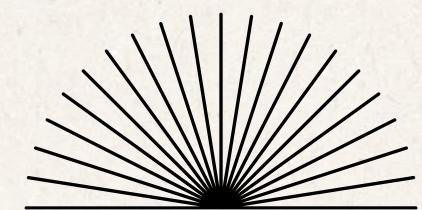
Project Name: LabSync AI

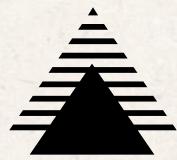
Sprint #: 3

Sprint Review



Time	Duration	Activity	Description	Presenter
9:00	5 min	Introduction	<ul style="list-style-type: none">· LabSync AI	Saad
9:05	5 min	Sprint Goals	<ul style="list-style-type: none">· Create Telegram Bot and get API token· Connect Telegram Webhook to backend· Test message reception and storage	Saad
9:10	5 min	Status Overview	<ul style="list-style-type: none">· Review Bug fixes	Inshal
9:15	5 min	Live Demo	<ul style="list-style-type: none">· Demonstration of bot backend functionality	Zohaib
9:20	5 min	Metrics	<ul style="list-style-type: none">· Present Sprint velocity· Planned and Completed story points	Saad
9:25	5 min	Blockers	<ul style="list-style-type: none">· Telegram bot not replying due to 1.1.1.1 vpn issue	Zohaib
9:30	5 min	Feedback	<ul style="list-style-type: none">· Collect feedback from product owner	Saad





Velocity Report



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Velocity Report

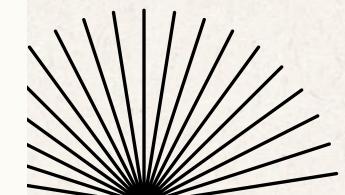
Project Name:

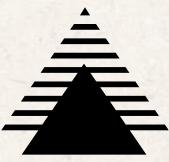
LabSync AI

Project Manager:

Saad Tahir

Sprint	Planned Points	Completed Points	Velocity %
Sprint 1	5	5	100
Sprint 2	8	7	87
Sprint 3	8	5	62
Sprint 4	5		0
Sprint 5	8		0





Sprint Retrospective

PMI Kickoff

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Project Title:

LabSync AI

Sprint #:

2

Sprint Retrospective

What worked well this sprint?

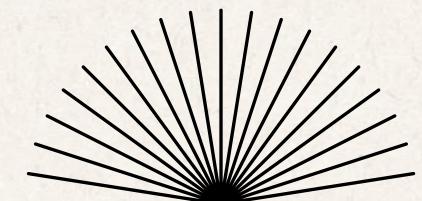
Daily Stand-ups were consistent.
Everyone updated progress regularly.
Clear task ownership.
Each member managed their assigned stories effectively.
Effective use of Trello Kanban.

What didn't work so well this sprint?

Code integration delays. Backend & frontend branches merged late, causing rework.
Slow testing feedback.
Unclear sprint boundary.

What will we do to improve next sprint?

Adopt shared GitHub branching policy. Feature branches + pull requests for cleaner merges.
Assign QA/test early. Parallel testing along development.
Define sprint scope clearly. Lock backlog tasks at sprint start.





GitHub

GitHub - MianSaadTahir/LabSync-AI: An AI assistant that reads incoming Telegram messages, extracts meeting details, and automatically updates the user's calendar and dashboard with reminders.

MianSaadTahir / LabSync-AI

Type / to search

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

LabSync-AI Public

Pin Watch 0 Fork 0 Star 0

main 1 Branch 0 Tags Go to file Add file Code About

9b0936f · 2 hours ago 5 Commits

Added Backend

backend Added Backend 2 hours ago

fronted Merge remote main (Saad's repo) into local 2 hours ago

.gitignore feat: initial frontend dashboard UI last week

README.md Initial commit last month

README

LabSync-AI

An AI assistant that reads incoming Telegram messages, extracts meeting details, and automatically updates the user's calendar and dashboard with reminders.

About

An AI assistant that reads incoming Telegram messages, extracts meeting details, and automatically updates the user's calendar and dashboard with reminders.

Readme Activity 0 stars 0 watching 0 forks

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Packages

No packages published Publish your first package

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Inshal-123