Basic Details of the Team and Problem Statement

Problem Statement Title: Design and prototype innovation app or software-based solutions that can detect the use, type, and scale of dark patterns on e-commerce platforms.

Team Name: Terminal Stack

Team Leader Name: AUDITEE SAHA CHOWDHURY

Institute Name: JIS College of Engineering

Theme Name: Dark patterns

Idea/Approach Details:

1. Cross-Platform Compatibility:
Ensure that the machine learning model and detection logic are compatible with both web and mobile platforms.
Use technologies like RESTful APIs for seamless communication between the website and mobile app.

2.User Registration and Authentication:
Implement user registration and authentication systems to track user activities and provide personalized results.
Focus on security measures to protect user data and privacy.

3. Real-Time Scanning for Mobile App:
Enable real-time scanning of URLs and domains within the mobile application.
Provide instant feedback to users about the legitimacy of websites they visit or links they receive.

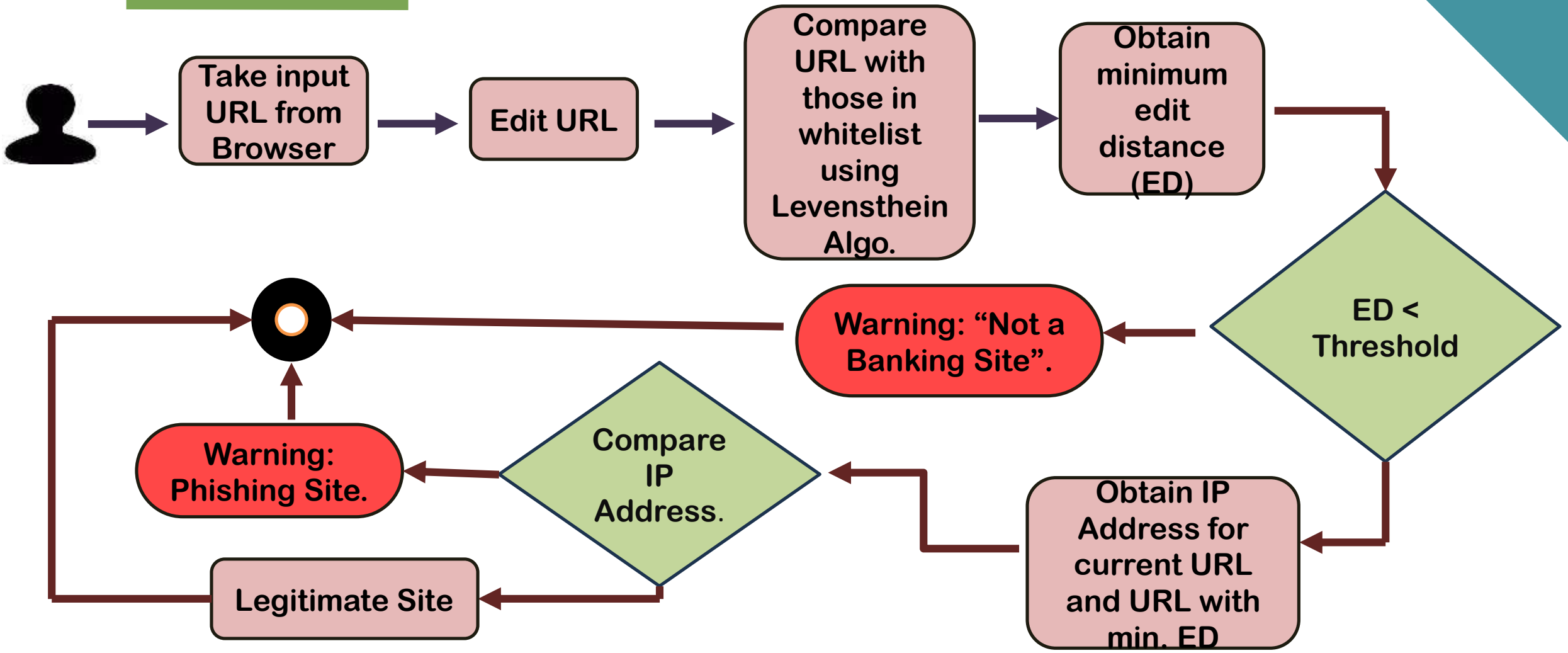
4. Web-Based Phishing Reporting:
Allow users to report suspicious URLs or domains through the website.
Implement a reporting system that aids in improving the detection model over time.

5. Offline Mode with Local Storage:
Create an offline mode for both the website and mobile app, allowing users to check domains even without an internet connection.
Store an updated version of the detection model and database locally on the user's device for offline use.

Technology stack

- **Languages:** Python, Kotlin, HTML and JavaScript.
- **ML Frameworks:** TensorFlow, Scikit-learn.
- **Training Data:** Labelled dataset of phishing and genuine domains.
- **Database:** PostgreSQL/MySQL (User Data), SQLite (Mobile).
- **Data Collection:** Web scraping.
- **Data Storage:** Databases .
- **User Interface:** User-friendly web interface.

FLOW CHART:-


Take input URL from Browser
Edit URL
Compare URL with those in whitelist using Levensthein Algo.
Obtain minimum edit distance (ED)
ED < Threshold
Warning: "Not a Banking Site".
Obtain IP Address for current URL and URL with min. ED
Compare IP Address.
Warning: Phishing Site.
Legitimate Site

Business Model:

B2B Market:

Target Audience: Enterprises, Businesses, IT Security Firms, Hosting Providers.

Revenue Model:

- **Subscription Plans:** Offer tiered subscription plans with varying levels of phishing domain monitoring.
- **API Access:** Provide APIs for seamless integration into enterprise security systems.

Value Proposition:

- Advanced phishing domain detection to safeguard business data.
- Integration capabilities to enhance existing security solutions.
- Customizable plans for scalability and flexibility.

B2C Market:

Target Audience: Individual Users, Small Business Owners, Freelancers.

Revenue Model:

- **Freemium Model:** Offer basic phishing domain scanning for free with premium features at a cost.
- **Individual Plans:** Subscription plans for personal users with multiple pricing tiers.

Value Proposition:

- Affordable phishing protection for personal online activities.
- User-friendly interface for ease of use.
- Regular updates for staying protected against evolving threats.

B2G Market:

Target Audience: Government Agencies, Regulatory Bodies.

Revenue Model:

- **Government Contracts:** Secure contracts with government bodies for comprehensive domain monitoring.
- **Custom Development:** Develop tailored solutions to meet specific government security needs.

Value Proposition:

- Strengthened national cybersecurity through proactive domain monitoring.
- Compliance with government regulations and standards.
- Collaborative approach to address evolving threats.

Market Size and Revenue Streams:

General Revenue Streams:

Subscriptions: Offer free and premium plans for advanced features.

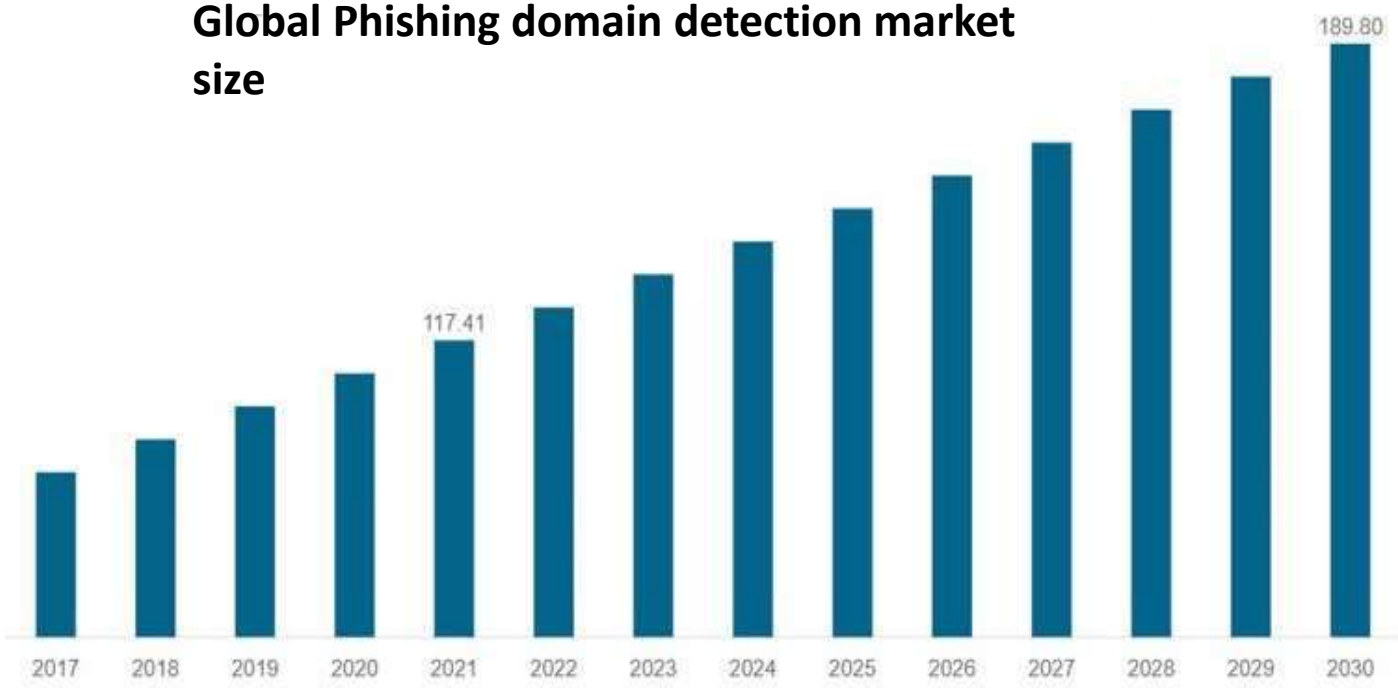
In-App Purchases: Sell additional features within the app.

Advertisements: Display targeted cybersecurity ads.

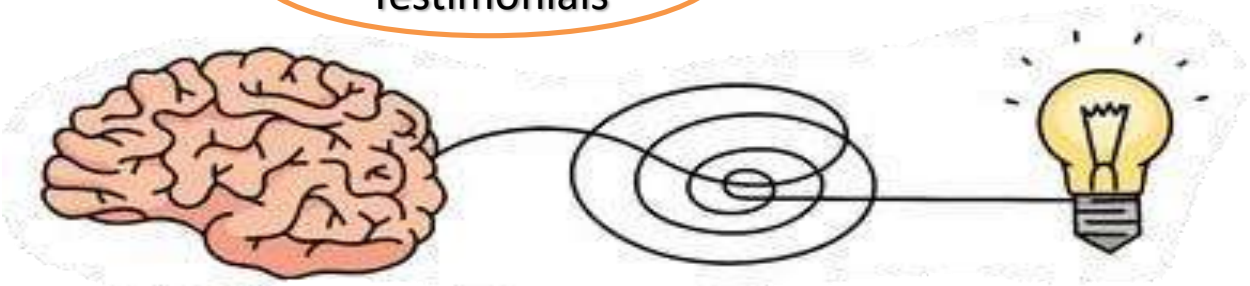
Consulting: Provide paid cybersecurity consulting.

Reports: Sell threat intelligence reports.

Global Phishing domain detection market size



Customer Accusation Strategy:



Future Scope and National Impact:

Future Scope:

- **Advanced Machine Learning:** Explore more advanced ML algorithms for even better accuracy in detecting phishing domains.
- **Real-Time Monitoring:** Develop real-time monitoring capabilities to identify new phishing domains as they emerge.
- **Global Expansion:** Expand the project's reach to address international phishing threats and collaborate with cybersecurity organizations worldwide.
- **User Education:** Integrate user education features to teach individuals and organizations about phishing threats and safe online practices.

National Impact:

- **Enhanced Cybersecurity:** Improve the overall cybersecurity posture of the nation by mitigating phishing threats that often lead to data breaches and financial losses.
- **Economic Protection:** Safeguard individuals and businesses from financial losses due to phishing attacks, thereby contributing to the national economy's stability.
- **Data Privacy:** Protect the privacy of citizens by reducing the risk of personal and sensitive data falling into the wrong hands.
- **Digital Trust:** Foster trust in online transactions, e-commerce, and digital services, encouraging greater adoption of digital technologies.

Perks

Final Stage

Expected Project completion

30-09-2023

Launch Date

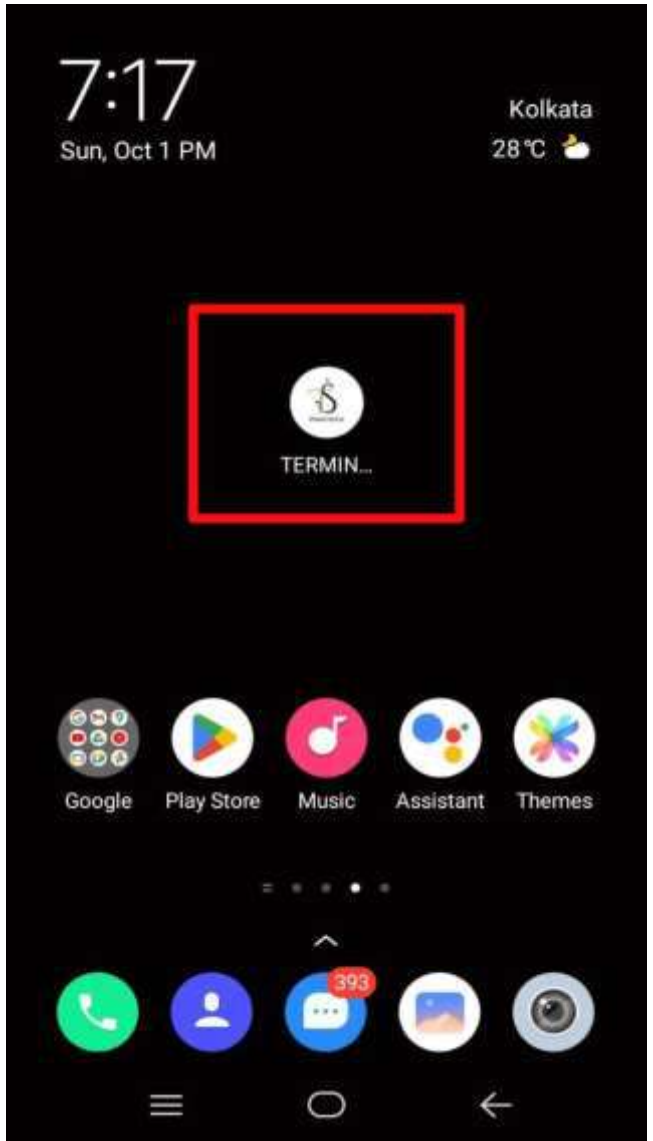
28-11-2023

First Stage

01-03-2024

12-12-2024

Our App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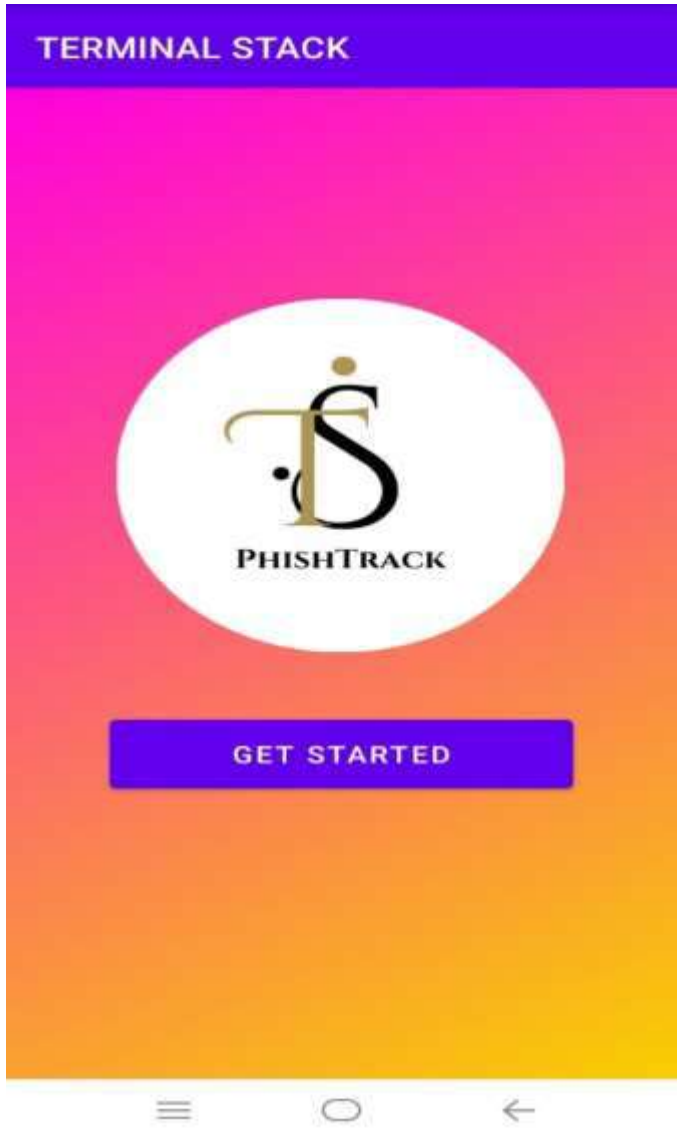
TERMINAL STACK
PHISHTRACK
GET STARTED


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TERMINAL STACK
TERMINAL STACK
OUR WEBSITE
OUR TEAM

Explanation about Our App

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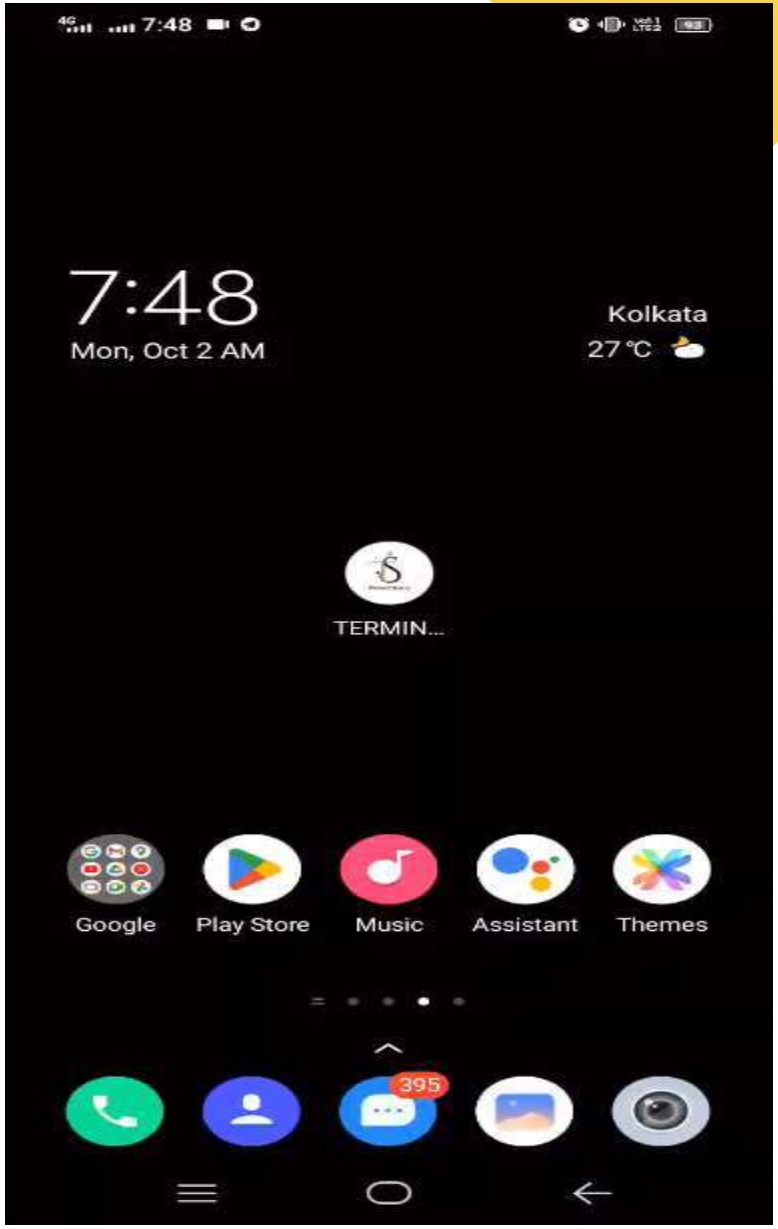

Team Member Details

Team Leader Name: AUDITEE SAHA CHOWDHURY

Branch (Btech/Mtech/PhD etc): **B.Tech**

Stream (ECE, CSE etc): **CSE**

Year (I,II,III,IV): **III**

Team Member 2 Name: MALLIKA AICH

Branch (Btech/Mtech/PhD etc): **B.Tech**

Stream (ECE, CSE etc): **CSE**

Year (I,II,III,IV): **III**

Team Member 3 Name: PRITI SARKAR

Branch (Btech/Mtech/PhD etc): **B.Tech**

Stream (ECE, CSE etc): **CSE**

Year (I,II,III,IV): **III**

Team Member 4 Name: MEGHA SAHA

Branch (Btech/Mtech/PhD etc): **B.Tech**

Stream (ECE, CSE etc): **CSE**

Year (I,II,III,IV): **III**

Team Mentor 1 Name: Miss Debasree Mitra

Category (Academic/Industry): **Academic**

Expertise (AI/ML/Blockchain etc): **ML**

Domain Experience (in years): **14Y**