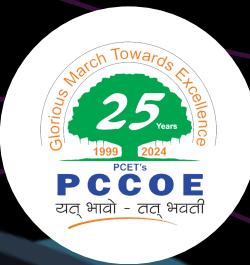


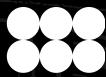
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GDGC PCCOE PRESENTS



ALPHA BYTE 2.0

PROBLEM STATEMENTS 2025

INNOVATE | DESIGN | DEVELOP



PROBLEM
STATEMENTS

DEVELOP
DESIGN
INNOVATE

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MORE INFORMATION:

[HTTPS://WWW.ALPHABYTE2025.GDGCPCCOE.ORG/](https://www.alphabyte2025.gdgcpccoe.org/)

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PROBLEM STATEMENT 1 (PS 1)

AIRBORNE THREAT DETECTION IN SURVEILLANCE VIDEOS

INTRODUCTION

In modern security and defense operations, timely and accurate detection of airborne threats is crucial. Traditional surveillance methods often rely on manual monitoring, which is inefficient, prone to human error, and struggles with differentiating between harmless objects like birds and potential threats such as drones or missiles. Our solution aims to revolutionize airborne threat detection using advanced object detection frameworks. By leveraging AI-driven classification and trajectory prediction, we enhance threat identification while minimizing false alarms. This automated approach ensures rapid response and improved security in diverse operational environments, including low-light and night-vision conditions.

SOLUTION EXPECTED

Our solution provides a cutting-edge airborne threat detection system that integrates advanced AI capabilities to enhance surveillance effectiveness and security.

OBJECTIVE

The primary goal of this phase is to train an AI model that can automatically detect and classify airborne objects, such as birds, drones, and missiles, from surveillance video footage. The challenge is to accurately distinguish between real threats (drones/missiles) and non-threatening objects (birds) while ensuring high-speed performance to avoid unnecessary delays in detection.

PROBLEM STATEMENT 1 (PS 1)

KEY STEPS IN ROUND 1

1. Training an AI Model on Surveillance Footage

- The AI model will be trained using 30-minute video clips containing instances of birds, drones, and missiles.
- The dataset should include diverse conditions (e.g., different backgrounds, lighting scenarios, object speeds) to improve generalization.

2. Implementing Object Detection Frameworks

- The model will be trained to detect, classify, and count the airborne objects detected in the surveillance footage.

3. Prioritizing High-Speed Inference to Reduce False Alarms

- One of the biggest challenges in airborne threat detection is the high rate of false alarms caused by birds.

4. Employing Optimized Detection Models for Accuracy

- Fine-tune the AI model using transfer learning from pre-trained models on object detection tasks.
- Apply data augmentation techniques to improve accuracy in different scenarios (e.g., changing background, lighting variations, motion blur).

EXPECTATION

2.0

We anticipate that our AI-powered airborne threat detection system will significantly enhance security operations by providing real-time identification and classification of potential threats. By integrating object detection, trajectory prediction, and multi-sensor data fusion, our solution will reduce false alarms, ensure rapid response times, and improve situational awareness. This advanced approach will support defense and surveillance teams in mitigating risks more effectively while operating under diverse environmental conditions.

CONCLUSION

Our AI-driven airborne threat detection system marks a transformative step in modern security and defense strategies. By leveraging cutting-edge object detection frameworks, trajectory analysis, and multi-sensor integration, we provide an intelligent, automated solution for identifying potential threats with precision. This innovation ensures a proactive approach to aerial surveillance, enhancing operational efficiency, reducing human error, and fortifying security against evolving airborne threats.

PROBLEM STATEMENT 2 (PS 2)

UI COMPONENT DESIGNER WITH AI INTEGRATION

INTRODUCTION

Designing user interfaces (UI) is a critical aspect of software development, but traditional methods often involve repetitive tasks, limited customization, and lack of collaboration. Developers and designers face challenges in creating responsive, visually appealing, and functional UIs efficiently. To address these issues, we introduce an innovative UI Component Designer Platform that leverages AI to revolutionize the way UIs are designed, customized, and deployed.

SOLUTION EXPECTED

Our platform is a web or desktop-based tool that enables users to create, customize, and preview user interfaces through an intuitive drag-and-drop interface. With AI-powered suggestions, the platform ensures efficiency and collaboration. It caters to designers, developers, and businesses seeking to streamline UI development while maintaining high-quality standards.

UNIQUE SELLING POINTS & FEATURES

IN ROUND 1

Drag-and-Drop UI Editor:

- Users can add, arrange, and resize elements like buttons, text fields, images, and forms.
- Components support basic styling options (e.g., color, font size, borders) and advanced customization.

Real-Time Preview Mode:

- Instantly preview and interact with the designed interface within the platform.
- Ensure all component functionalities work as intended in the preview.

PROBLEM STATEMENT 2 (PS 2)

AI-Powered Design Suggestions:

- AI analyzes user designs and suggests improvements for layout, color schemes, and accessibility.
- Automatically generate responsive designs for different screen sizes (desktop, tablet, mobile).

Component Library:

- A library of pre-made components (e.g., modals, navigation bars, input forms) that users can drag into their designs.
- Allow users to customize or extend these components.

EXPECTATION

We anticipate that our UI Component Designer Platform will significantly reduce the time and effort required to create high-quality user interfaces. By integrating AI, the platform will enhance collaboration, ensure design integrity, and provide advanced customization options. This will empower designers and developers to focus on creativity and innovation, ultimately leading to better user experiences and faster project delivery.

CONCLUSION

In conclusion, our UI Component Designer Platform represents a paradigm shift in how user interfaces are designed and developed. By leveraging AI, we aim to set a new standard for UI design tools, offering unparalleled efficiency and ease of use. We look forward to empowering designers and developers to create exceptional UIs with confidence.

PROBLEM STATEMENT 3 (PS 3)

ENHANCING CLINICAL DECISION SUPPORT SYSTEMS WITH RETRIEVAL-AUGMENTED GENERATION (RAG) MODEL

INTRODUCTION

Healthcare professionals often struggle to access accurate, real-time, and relevant medical information for critical decision-making. Traditional Clinical Decision Support Systems (CDSS) rely on static databases and predefined rules, limiting their adaptability to evolving medical research and treatment protocols. Key challenges include:

- Difficulty in retrieving patient-specific insights from vast structured and unstructured medical data.
- Lack of real-time integration with the latest research papers, guidelines, and case studies.

SOLUTION EXPECTED

Our system leverages Retrieval-Augmented Generation (RAG) to combine retrieval models for fetching relevant medical information with generative AI for context-aware clinical recommendations. This system will:

- Retrieve up-to-date research papers, clinical guidelines, and case studies.
- Integrate structured EHR data with retrieved insights for patient-specific recommendations.

UNIQUE SELLING POINTS & FEATURES

Data Collection & Processing:

- Extract structured patient data from Electronic Health Records (EHRs).
- Scrape and preprocess unstructured data from medical research repositories (PubMed, WHO, FDA).
- Store and retrieve data efficiently using vector databases.

AI-Powered Clinical Decision Support:

- Fine-tuned retrieval models to fetch relevant medical information.
- Generative AI (e.g., GPT-4) to contextualize and summarize retrieved data.
- Named Entity Recognition (NER) to extract medical conditions, drugs, and treatment suggestions.

EXPECTATION

By implementing this AI-powered Clinical Decision Support System, healthcare professionals can make more accurate, informed, and efficient decisions. The system will enhance diagnostic precision, reduce medical errors, and streamline patient management.

CONCLUSION

In conclusion, our RAG-based Clinical Decision Support System revolutionizes healthcare by bridging the gap between static knowledge bases and real-time medical intelligence. By integrating AI-driven retrieval and generation, this system empowers clinicians with reliable, up-to-date, and personalized recommendations, ultimately improving patient outcomes and medical efficiency.



PROBLEM STATEMENT 4 (PS 4)

DEEPCODE & SOCIAL ENGINEERING ATTACK DETECTOR

INTRODUCTION

Deepfake technology is increasingly being exploited for social engineering attacks such as voice phishing, business email compromise (BEC), and fake video authentication. These threats pose significant risks to individuals and organizations, making it crucial to develop an AI-powered fraud detection system to identify and prevent deepfake-based attacks effectively.

SOLUTION EXPECTED

Our platform is a browser/desktop extension that scans and detects deepfake content in real-time across various communication channels, including video calls, emails, and social media. By leveraging AI-driven media analysis, the system ensures accurate detection and provides users with actionable insights to mitigate security risks.

UNIQUE SELLING POINTS & FEATURES IN ROUND 1

Client-Side Detection:

- Monitor and analyze audio/video calls on platforms like Zoom, Teams, and WhatsApp.
- Scan emails for impersonation attempts and phishing attacks.
- Detect fake profiles and fraudulent messages on social media.

AI-Powered Media Analysis:

- Facial Landmarks & Lip Sync Analysis to identify video tampering.
- Voice Biometrics & MFCC Analysis to detect synthetic speech.
- NLP-based Linguistic Analysis to recognize phishing patterns in emails.

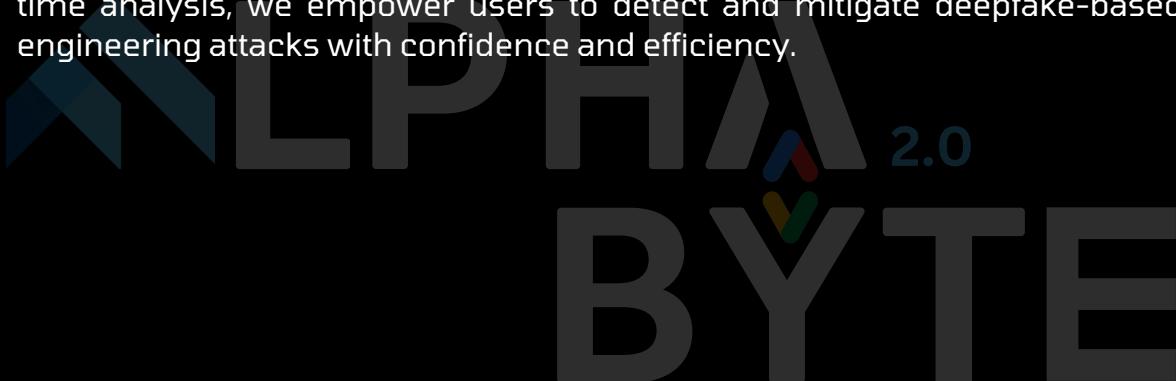
PROBLEM STATEMENT 4 (PS 4)

EXPECTATION

We anticipate that our Deepfake & Social Engineering Attack Detector will significantly enhance cybersecurity by identifying deepfake threats before they cause harm. The AI-driven approach will improve detection accuracy, safeguard personal and business communications, and offer seamless integration across various platforms.

CONCLUSION

In conclusion, our AI-powered fraud detection system sets a new standard in deepfake prevention. By combining cutting-edge deep learning models with real-time analysis, we empower users to detect and mitigate deepfake-based social engineering attacks with confidence and efficiency.

A large, semi-transparent watermark of the ALPHA BYTE 2.0 logo is centered on the page, with the "ALPHA" and "BYTE" parts in a large serif font and the "2.0" part in a smaller sans-serif font below them.

PROBLEM STATEMENT 5 (PS 5)

RANSOMWARE EARLY DETECTION & RESPONSE SYSTEM

INTRODUCTION

Ransomware is one of the most damaging cyber threats, leading to encrypted files and financial extortion. Traditional security measures often fail to detect ransomware attacks before encryption completes, making early detection crucial. This project aims to build an AI-driven ransomware detection and prevention system that identifies attacks in real-time and mitigates their impact.

SOLUTION EXPECTED

Our system is a real-time monitoring agent designed to detect and respond to ransomware threats before they cause significant damage. By analyzing file and process behavior, it provides proactive alerts and automated responses to neutralize potential attacks before encryption completes.

2.0

UNIQUE SELLING POINTS & FEATURES

IN ROUND 1

Client-Side Monitoring:

- Detect unusual file encryption patterns and mass renaming/deletion of files.
- Monitor unauthorized process execution, including PowerShell, cmd, and wmic abuse.
- Analyze system behavior to detect potential ransomware activity in real-time.

AI-Powered Threat Detection:

- Identify file entropy changes, which indicate ransomware modifying file structures.
- Track process API calls related to cryptographic operations and shadow copy deletion.
- Detect registry modifications commonly associated with ransomware attacks.

PROBLEM STATEMENT 5 (PS 5)

EXPECTATION

We anticipate that our Ransomware Early Detection & Response System will significantly reduce the impact of ransomware attacks by identifying threats before encryption completes. By leveraging AI-driven anomaly detection, it ensures proactive security and minimizes data loss for individuals and organizations.

CONCLUSION

In conclusion, our AI-powered ransomware detection system sets a new benchmark in cybersecurity. By combining advanced behavioral analysis, real-time monitoring, and automated threat response, we empower users to protect their data from ransomware attacks efficiently and effectively.



PROBLEM STATEMENT 6 (PS 6)

OSINT-BASED DARK WEB THREAT INTELLIGENCE PLATFORM

INTRODUCTION

Organizations struggle to monitor leaked credentials, vulnerabilities, and cyberattack planning on the dark web. Traditional security measures fail to track hidden threats in underground forums and encrypted networks. This project focuses on building an OSINT-based intelligence tool that crawls hacker forums, TOR websites, and data leak dumps to provide actionable threat intelligence.

SOLUTION EXPECTED

Our system is a web-based intelligence platform that continuously monitors and analyzes dark web activities. By leveraging advanced NLP and graph-based analytics, it detects leaked credentials, cyberattack discussions, and emerging threats in real-time, helping security teams stay ahead of potential risks.

UNIQUE SELLING POINTS & FEATURES

IN ROUND 1

Dark Web Crawling & Data Collection:

- Scrape and analyze TOR-based hacker forums, breach databases, and underground marketplaces.
- Monitor paste sites for leaked credentials and stolen data.
- Track cybercrime discussions in real-time to detect emerging threats.

AI-Powered Threat Intelligence:

- Named Entity Recognition (NER) to extract sensitive information such as usernames, passwords, and emails.
- BERT-based Topic Modeling to classify discussions into categories like hacking, exploits, and scams.
- Sentiment Analysis on hacker conversations to detect planned cyberattacks.

PROBLEM STATEMENT 6 (PS 6)

EXPECTATION

By implementing this OSINT-based Dark Web Threat Intelligence Platform, organizations can proactively detect and respond to cyber threats before they escalate. This system provides deep insights into hacker activities, helping security teams prevent data breaches, financial fraud, and cyberattacks.

CONCLUSION

In conclusion, our AI-powered dark web monitoring system revolutionizes cybersecurity by delivering real-time intelligence and risk analysis. By combining NLP, machine learning, and OSINT techniques, we empower organizations to safeguard their assets from hidden cyber threats effectively.



PROBLEM STATEMENT 7 (PS 7)

BLOOD DONATION & EMERGENCY HELP (MOBILE APP)

INTRODUCTION

During medical emergencies, finding a compatible blood donor or receiving immediate assistance can be a life-or-death situation. Many patients struggle to access blood due to shortages, delays, or reliance on middlemen. This platform aims to directly connect blood donors with recipients based on location, ensuring timely donations and emergency support without unnecessary delays.

SOLUTION EXPECTED

Our platform is a mobile and web-based application that facilitates real-time blood donation matching and emergency assistance. By leveraging location-based services, donor availability tracking, and real-time notifications, the system ensures rapid response times, directly linking donors, recipients, and emergency responders.

ALPHA 2.0

UNIQUE SELLING POINTS & FEATURES

IN ROUND 1

Blood Request System:

- Users can request blood by specifying blood type, urgency level, and hospital location.
- Requests are broadcasted to nearby potential donors, increasing response rates.
- A request tracking system allows real-time monitoring of request status.

Location-Based Donor Matching:

- The system finds and notifies nearby registered donors matching the required blood type.
- Donors can accept or decline requests based on availability.
- Prioritization of closest available donors ensures minimal travel time.

PROBLEM STATEMENT 7 (PS 7)

Emergency SOS Alerts:

- An SOS button allows users to instantly notify nearby volunteers, emergency contacts, or responders.
- Alerts include live location and details about the emergency.
- Responders can accept SOS requests and provide assistance.

Blood Bank Inventory Integration:

- Integration with hospitals and blood banks provides real-time blood stock availability.
- If no direct donors are available, users can check nearby blood banks for required blood types.

Donor Availability Status:

- Donors can update their status (Available/Unavailable) at any time.
- Only active donors receive urgent blood requests, reducing unnecessary notifications.

EXPECTATION

We anticipate that our Blood Donation & Emergency Help platform will revolutionize the way blood donation and emergency response are handled. By eliminating delays and providing a seamless donor-recipient connection, the system will save lives, increase donor participation, and improve accessibility to emergency medical assistance.

CONCLUSION

In conclusion, our platform leverages advanced technology, real-time data, and AI-driven prioritization to create an efficient, reliable, and lifesaving blood donation and emergency support system. By fostering a community-driven approach, we ensure that those in need receive timely help, making a tangible impact on public healthcare and emergency response.

PROBLEM STATEMENT 8 (PS 8)

DIRECT FARMER-TO-CONSUMER MARKETPLACE {MOBILE APP}

INTRODUCTION

Farmers often struggle to get fair prices for their produce due to middlemen who take a large share of the profit. This platform aims to eliminate intermediaries by enabling direct connections between farmers, consumers, and retailers. Through a user-friendly mobile application, farmers can list their produce, negotiate prices, manage orders, and receive payments seamlessly. The platform should ensure transparency, real-time communication, and accessibility to a larger customer base, helping farmers increase their income while ensuring fresh produce reaches buyers at reasonable prices.

SOLUTION EXPECTED

Our platform is a mobile and web-based application that enables farmers to directly connect with consumers and retailers. By integrating location-based buyer matching, direct messaging, and an intuitive order management system, the platform ensures efficiency and fairness in agricultural trade.

UNIQUE SELLING POINTS & FEATURES

IN ROUND 1

Farmer Profile & Product Listings

- Farmers can create profiles and list available produce, including details such as price per unit, available quantity, and expected harvest date.
- Image uploads and descriptions help attract buyers.
- An easy-to-use interface allows farmers to update stock availability in real-time.

Location-Based Buyer Matching

- The system suggests nearby buyers or retailers based on the farmer's location.
- Buyers searching for specific produce see a list of farmers offering it within their preferred radius.
- Reduces transportation costs and ensures fresher products reach consumers.

PROBLEM STATEMENT 8 (PS 8)

Direct Messaging for Negotiation

- In-app messaging system enables buyers and farmers to discuss pricing, quantity, and delivery preferences.
- Supports text and voice messages for inclusivity.
- Pre-set message options simplify negotiations.

Order Placement & Confirmation

- Buyers can browse, place orders, and specify quantities.
- Farmers receive notifications and can accept or reject orders.
- Order tracking system updates users on status changes (pending, confirmed, dispatched, delivered).

EXPECTATION

We anticipate that our Direct Farmer-to-Consumer Marketplace will significantly reduce dependency on middlemen, increase farmers' earnings, and provide consumers with fresh, affordable produce. By leveraging technology, AI-driven pricing, and real-time buyer matching, the system ensures a fair and transparent agricultural trade ecosystem.

CONCLUSION

In conclusion, our platform aims to revolutionize agricultural sales by providing instant, location-based buyer matching and direct farmer-to-consumer transactions. Through AI-powered pricing, real-time messaging, and smart inventory management, we ensure a sustainable and efficient marketplace for both farmers and buyers.

PROBLEM STATEMENT 9 (PS 9)

DECENTRALGIG: BLOCKCHAIN-POWERED FREELANCE MARKETPLACE

INTRODUCTION

The freelance marketplace has evolved significantly, yet centralized platforms like Fiverr impose high fees, enforce strict policies, and control user data, limiting the freedom and financial benefits of freelancers. Additionally, disputes are often resolved unfairly, and users have limited transparency in payment processing. To address these challenges, we propose a decentralized freelance marketplace, leveraging blockchain technology to ensure transparency, reduce fees, and provide users with true ownership over their work and payments.

SOLUTION EXPECTED

Our platform is a Web3-based decentralized freelance marketplace where freelancers can list services, and clients can hire them using smart contracts. Payments are securely held in escrow and automatically released upon task completion. Dispute resolution is managed through a Decentralized Autonomous Organization (DAO), ensuring fairness. Additionally, decentralized identities (DIDs) and reputation systems prevent fraud while maintaining user privacy.

UNIQUE SELLING POINTS & FEATURES

IN ROUND 1

Smart Contract-Based Payments:

- Clients deposit funds into a smart contract escrow.
- Payment is released automatically upon task completion.
- Supports milestone-based payments.

Decentralized Identity & Reputation System:

- User profiles are stored on a blockchain to prevent manipulation.
- Reputation is built over time and remains verifiable.
- Zero-Knowledge Proofs (ZKPs) enable work verification without revealing personal details.

Dispute Resolution via DAO Arbitration:

- Users can stake tokens to become arbitrators.
- Arbitrators vote on disputes and earn rewards for fair decisions. Reduces biased and inefficient dispute handling.

PROBLEM STATEMENT 9 (PS 9)

EXPECTATION

We anticipate that our decentralized freelance marketplace will revolutionize the gig economy by eliminating intermediaries, reducing costs, and increasing transparency. By leveraging blockchain technology, freelancers and clients can transact with greater security, privacy, and fairness. The integration of smart contracts, DID, and DAO arbitration ensures a trustless and self-sustaining ecosystem where users have full control over their work and earnings.

CONCLUSION

In conclusion, our decentralized freelance marketplace represents a paradigm shift in how freelancing platforms operate. By leveraging Web3 technology, we empower freelancers and clients with a fair, low-cost, and censorship-resistant platform. This initiative aims to set a new standard for freelancing, ensuring that talent and hard work are rewarded without interference from centralized authorities.



PROBLEM STATEMENT 10 (PS 10)

IDENTIFICATION OF PERSONALLY IDENTIFIABLE INFORMATION (PII) IN DOCUMENTS AND DATA

INTRODUCTION

In today's digital age, numerous services require users to upload government-issued documents or provide personal data for verification and processing. These documents, such as Aadhaar card, PAN card, driving license, and credit card details, contain personally identifiable information (PII) that can uniquely identify an individual. The inadvertent or intentional exposure of PII poses significant risks, including identity theft, financial fraud, and privacy breaches. Organizations handling such documents must ensure secure data management practices, including storage, encryption, access control, and compliance with data protection regulations.

SOLUTION EXPECTED

A software application or library package that detects and alerts users when PII from government-issued identification documents is embedded in uploaded documents or provided data. The application will help organizations verify the necessity of retaining such PII, enabling them to redact, mask, or remove it when not required. Additionally, it will notify users of potential privacy risks before submitting sensitive information.

UNIQUE SELLING POINTS & FEATURES

IN ROUND 1

PII Detection in Uploaded Documents

- Automatically scans uploaded documents for Aadhaar, PAN, driving licenses, and other PII-related data.
- Uses OCR and machine learning models to identify sensitive information.
- Provides a risk assessment score for detected PII content.

PROBLEM STATEMENT 10 (PS 10)

Real-Time User Alerts

- Notifies users before submitting documents containing PII.
- Displays recommendations on whether to proceed with uploading or redact sensitive details.
- Ensures users make informed decisions regarding data privacy.

Data Redaction and Masking

- Allows organizations to remove or blur sensitive data from documents.
- Ensures compliance with privacy laws by limiting exposure of unnecessary PII.
- Supports multiple document formats, including PDF, JPEG, and PNG.
- Provides an admin dashboard for reviewing past detections. (Bonus)

User Consent & Policy Enforcement

- Ensures users acknowledge data privacy policies before uploading sensitive documents.
- Helps organizations enforce best practices for PII handling.
- Reduces the risk of unauthorized data exposure.

EXPECTATION

We anticipate that our PII identification and redaction application will significantly enhance data privacy, reduce compliance risks, and improve operational efficiency for organizations handling sensitive documents. By leveraging AI-driven detection, real-time alerts, and secure redaction mechanisms, the system ensures robust protection of personally identifiable information.

CONCLUSION

Our platform aims to create a safer digital environment by enabling users and organizations to detect and manage PII effectively. Through AI-powered classification, multi-language support, and blockchain-based audit trails, we provide a comprehensive solution for ensuring compliance with privacy regulations and mitigating data security risks.

PROBLEM STATEMENT 11 (PS 11)

HUMANITARIAN CRISIS RELIEF AND SUPPORT APP

INTRODUCTION

In an increasingly interconnected world, humanitarian crises—such as natural disasters, conflicts, and pandemics—demand swift action and support. However, challenges like misinformation, lack of transparency in donations, and difficulties in mobilizing resources hinder relief efforts. This mobile application aims to address these issues by providing real-time crisis updates, secure and transparent donation processing, and awareness campaigns to educate and engage users. By ensuring accountability and security, the platform will serve as a reliable source of information and a bridge between donors, NGOs, and affected communities.

SOLUTION EXPECTED

A mobile application that provides real-time crisis updates, enables secure donations, ensures transparency in fund distribution, and raises awareness through educational campaigns. It will incorporate AI-powered crisis prediction, decentralized fund management, and a volunteer network to enhance humanitarian response.

UNIQUE SELLING POINTS & FEATURES

IN ROUND 1

Real-Time Crisis Information

- Integrates official data sources (UN, WHO, Red Cross, government agencies) for accurate updates.
- Displays interactive crisis maps highlighting affected areas.
- Categorizes crises based on type (natural disaster, humanitarian conflict, pandemic, etc.).
- Enables push notifications for urgent crisis alerts.

Donation Management

- Implements secure payment gateways (Stripe, Razorpay, Google Pay, PayPal) for seamless transactions.
- Allows users to donate to specific causes or organizations.
- Provides instant digital receipts and confirmation of donations.

PROBLEM STATEMENT 11 (PS 11)

Transparency and Accountability

- Displays real-time fund distribution reports through visual dashboards.
- Partners with NGOs to share updates on how donations are utilized.
- Implements blockchain-based tracking for transparent fund allocation.

Awareness Campaigns

- Creates engaging multimedia content (blogs, videos, infographics) to educate users on crises.
- Runs interactive social campaigns encouraging donations and volunteer participation.
- Gamifies engagement by awarding badges for frequent donors or campaign sharers.

User Authentication and Security

- Implements OTP/email-based authentication for secure logins.
- Uses two-factor authentication (2FA) for financial transactions.
- Encrypts user data and payment details to prevent breaches.

EXPECTATION

We anticipate that our Direct Farmer-to-Consumer Marketplace will significantly reduce dependency on middlemen, increase farmers' earnings, and provide consumers with fresh, affordable produce. By leveraging technology, AI-driven pricing, and real-time buyer matching, the system ensures a fair and transparent agricultural trade ecosystem.

CONCLUSION

In conclusion, our platform aims to revolutionize agricultural sales by providing instant, location-based buyer matching and direct farmer-to-consumer transactions. Through AI-powered pricing, real-time messaging, and smart inventory management, we ensure a sustainable and efficient marketplace for both farmers and buyers.

ROUND 1

ONLINE PROBLEM-SOLVING & DEVELOPMENT

DATE	1ST MARCH 2025(TENTATIVE)
MODE	ONLINE MODE, ON UNSTOP
DURATION	24 HOURS 

DESCRIPTION OF ROUND 1

TEAMS WILL SOLVE AT LEAST 60% TO 75 % OF THE PROBLEM STATEMENT OR PROJECT IDEA. THE PROGRESS SHOULD BE PRESENTED FOR EVALUATION THROUGH:

- POWERPOINT PRESENTATION (PPT)
- VIDEO RECORDING
- GITHUB REPOSITORY
- CODE FILES AND SUPPORTING DOCUMENTATION

SCORING CRITERIA

ALL SUBMISSIONS MUST BE UPLOADED TO THE PLATFORM(UNSTOP) BY THE DEADLINE.
SUBMISSIONS WILL BE EVALUATED BASED ON THE COMPLETENESS AND QUALITY OF THE SOLUTION.
SUBMISSION AFTER THE DEADLINE WILL NOT BE ENTERTAINED

RULES & REGULATIONS

ALL SUBMISSIONS MUST BE UPLOADED TO THE PLATFORM(UNSTOP) BY THE DEADLINE.
SUBMISSIONS WILL BE EVALUATED BASED ON THE COMPLETENESS AND QUALITY OF THE SOLUTION.
SUBMISSION AFTER THE DEADLINE WILL NOT BE ENTERTAINED

ELIMINATION

TOP 20 TEAMS WILL BE SELECTED FOR THE FINAL ROUND.

ROUND 2

OFFLINE, PROTOTYPE & DEVELOPMENT

DATE	8 TH MARCH 2025
MODE	OFFLINE MODE, AT PCCOE CAMPUS
TIME	09:00AM TO 09:00 PM, MEALS WILL BE PROVIDED

DESCRIPTION OF ROUND 2

SELECTED TEAMS WILL CONTINUE DEVELOPING THEIR PROTOTYPE AND PRESENT THEIR FINAL SOLUTION TO A PANEL OF JUDGES.

SCORING CRITERIA

- INNOVATION: CREATIVITY AND UNIQUENESS OF THE SOLUTION
- TECHNICAL IMPLEMENTATION: EFFICIENCY AND ROBUSTNESS OF THE SOLUTION
- PRESENTATION: CLARITY AND EFFECTIVENESS OF COMMUNICATION
- USABILITY & IMPACT: PRACTICALITY AND POTENTIAL MARKET IMPACT

RULES & REGULATIONS

DEVELOPMENT MUST BE COMPLETED WITHIN THE GIVEN TIME.

TEAMS MUST PRESENT THEIR SOLUTION, INCLUDING TECHNICAL IMPLEMENTATION, BUSINESS IMPACT, AND SCALABILITY, IN A MAX 10 MINUTE PRESENTATION FOLLOWED BY A Q&A SESSION WITH JUDGES.

FINAL WINNERS

WINNERS WILL RECEIVE PRIZES, OPPORTUNITIES, AND EXCLUSIVE GOODIES.



FAIR PLAY & DISQUALIFICATION RULES

INDEPENDENT WORK

TEAMS MUST WORK INDEPENDENTLY UNLESS COLLABORATION IS EXPLICITLY ALLOWED. ANY UNAUTHORIZED ASSISTANCE FROM EXTERNAL SOURCES WILL BE CONSIDERED A VIOLATION.

PLAGARIISM & CHEATING

ANY FORM OF PLAGIARISM, COPYING, OR UNAUTHORIZED RESOURCE USE WILL LEAD TO IMMEDIATE DISQUALIFICATION. PRE-MADE SOLUTIONS ARE STRICTLY PROHIBITED UNLESS PROPERLY ACKNOWLEDGED AND DECLARED TO THE HOSTS.

ETHICAL BEHAVIOUR

PARTICIPANTS MUST UPHOLD PROFESSIONALISM AND RESPECT. MISBEHAVIOR, HARASSMENT, OR RULE VIOLATIONS WILL LEAD TO REMOVAL, WHILE DISRUPTIVE CONDUCT TOWARD VOLUNTEERS, JUDGES, OR PEERS MEANS DIRECT DISQUALIFICATION.

FAIR COMPETITION

ANY ATTEMPT TO MANIPULATE, EXPLOIT, OR INTERFERE WITH THE EVENT'S INTEGRITY WILL BE PENALIZED. THE EVENT ORGANIZERS RESERVE THE RIGHT TO INVESTIGATE AND TAKE APPROPRIATE ACTION AGAINST ANY UNETHICAL PRACTICES.

SUBMISSION DEADLINE

LATE SUBMISSIONS WILL NOT BE ACCEPTED UNDER ANY CIRCUMSTANCES.

JUDGMENT FINALITY AND CLARIFICATION

- THE JUDGE'S DECISION SHALL BE CONSIDERED FINAL AND BINDING.
- ONCE A VERDICT OR RULING IS MADE, IT CANNOT BE ALTERED OR CONTESTED.
- TO ENSURE TRANSPARENCY AND PREVENT ANY MISCONCEPTIONS, THE JUDGE MAY CHOOSE TO PROVIDE AN EXPLANATION FOR THEIR DECISION. HOWEVER, OFFERING SUCH AN EXPLANATION IS ENTIRELY VOLUNTARY AND NOT A MANDATORY REQUIREMENT.
- PARTICIPANTS ARE EXPECTED TO RESPECT THE FINALITY OF THE JUDGMENT AND ADHERE TO THE ESTABLISHED RULES AND GUIDELINES.

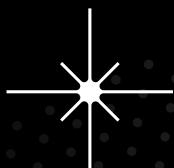
CONTACT INFORMATION

FOR ANY INQUIRIES OR ASSISTANCE, PLEASE CONTACT THE
ALPHABYTE 2.0 ORGANIZING TEAM AT



CONCLUSION

THANK YOU FOR YOUR INTEREST IN **ALPHABYTE 2.0**. WE WISH ALL PARTICIPANTS THE BEST OF LUCK AND LOOK FORWARD TO SEEING THE INNOVATIVE PROJECTS YOU CREATE DURING THE HACKATHON!



MORE INFORMATION:

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