



महाराष्ट्र MAHARASHTRA

2022

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AFFIDAVIT

This affidavit is about setting up center for excellence lab at SLRTCE for Cryptocurrency investigation. In Association with Lab Systems (I) Pvt.Ltd.

Lab Systems (I) Pvt. Ltd. is a team of engineering professionals committed to provide digital forensic solutions to clients across a broad spectrum of industries. Lab Systems India Pvt. Ltd., and its affiliated companies are passionately committed to detect, Investigate and prevent fraudulent practices happening in corporate and government sectors. Shree L. R. Tiwari College of Engineering, established in the year 2010, the first engineering college in Mira-Bhayandar, and since then has provided a sound platform, equipping students to stand on their own feet, visualize, grow and build a bright future in the ever-growing industry.

Dr.Deven Shah, Principal SLRTCE is working on Blockchain Tech from 2017 and created expertise in cryptocurrency investigation. In spite of having the technical background as a academician there is a lacking of on field investigation expertise. In order to fill this gap SLRTCE has identify Lab Systems, who are into forensic investigation from last 20 years, supporting various law agencies across India. Lab Systems will give SLRTCE the opportunity to work on real time challenges of investigation.

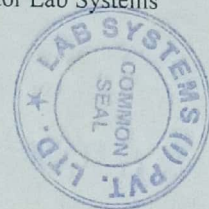
SLRTCE will set up a live Bitcoin node and private Bitcoin setup for exclusive training to clients of Lab Systems. SLRTCE will create a team of students and faculty, which include Dr.Deven Shah ,Dr.Vikas Kaul and Prof.Pravin Jangid and few students to work on this technology and support Lab Systems.

Lab Systems (I) Pvt.Ltd will give an endowment of Rs.24 Lakh for this activity with initial signing amount of Rs.1 Lakh + GST.

Dr Deven Shah
Principal SLRTCE



Mr. Venkatesan Subramanian
Managing Director Lab Systems



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६१ JUN २०२२

मुद्रांक विक्री नोंदवही अनुक्रमांक दिनांक

दस्तावा प्रकार ... Agreement दस्त नोंदणी करणार आहे का ? होय/नाह

मुद्रांक विक्री घेणाऱ्याचे नाव For Smt. Kantilalan Tiwari Education Society

हस्ते अस्तित्वात त्याचे नाव ... Damodar

पत्ता ... Bhikhandor Thane Chairman Hon. Secretary Treasurer

मिळकतीचे थोडक्यात वर्णन

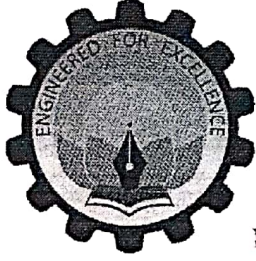
दुसऱ्या पक्षकाराचे नाव मुद्रांक शुल्क रक्कम 1000

मुद्रांक विक्रीच्याची सही (के. डी. चावंडे)

मुद्रांक विक्रीचे ठिकाण / पत्ता - लक्ष्मी कॉम्प्युटर सेंटर, (७), न्यु नवरंज अपार्टमेंट, केबीन रोड, भाईंदर (पूर्व), ४०११०५. मुद्रांक परवाना क्र. १२०१०३

६१ JUN २०२२





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Minority Status (Hindi Linguistic)

Status report for Lab system projects

1. Project Title: Image Processing Filter for ICV Pro

Report Date: May 16, 2024

Project Manager: Prof. Neelam Phadnis and Prof. Pravin Jangid

Students Name: Ankita Upadhay, Deepanshu Yadav, Rakshita Poojari, Naman Pandey, Mala Soren

Executive Summary

It is a versatile tool designed to meet the demands of professionals across various industries. It is a team of AI, Python, and UI experts. With support for a wide range of image and video formats, including JPEG, PNG, MP4, AVI, and more, it ensures seamless handling of your media resources. From tasks including object detection and tracking to motion detection, geotag analysis, embedded image extraction, etc it simplifies various organizational tasks. The software can be used for security sector, law enforcement, or any field that requires meticulous image and video analysis.

1. Version 1.0 Release

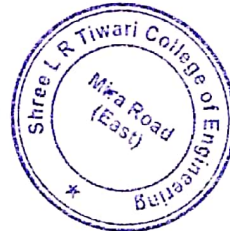
- Released the first stable version of the Image Processing Filter.

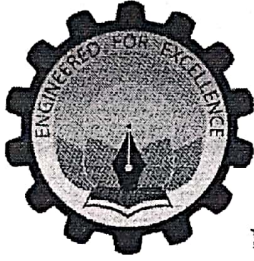
Conclusion

The Image Processing Filter project for ICV Pro is progressing smoothly, with the successful release of version 1.0 marking a significant achievement. The focus will now shift to user training, support, and planning for future enhancements to ensure the continued success and improvement of the project.

Prepared by: Pravin Jangid and Neelam Phadnis

Position: Project Manager





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2. Project Title: Video Analytics and object identification

Project Manager: Mr. Pravin Jangid and Ms. Neelam Phadnis

Students Name: Ankita Upadhay, Rakshita Poojari, Mala Soren and Kompal Layal

Executive Summary

The Image Processing Filter supports popular image and video formats, including JPEG, PNG, MP4, and AVI. Key features include defining regions of interest (ROIs) and tracking objects such as motion, faces, people, and license plates. Integration with third-party systems, an intuitive interface, and customizable reports enhance usability. Advanced functionalities include geotag analysis, video merging, timestamp extraction, metadata analysis, and AI-based vehicle number plate and facial recognition. Additional features encompass image comparison, annotation grouping, and tracking based on exclusion criteria.

Project Deliverables and Features

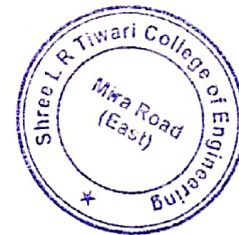
Supported Formats

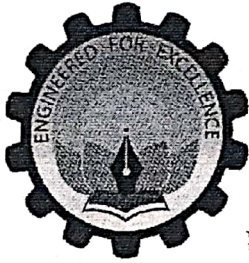
- **Image Formats:** JPEG, PNG, BMP, TIFF, GIF
- **Video Formats:** MP4, AVI, MKV, MOV, WMV

Key Features

1. Regions of Interest (ROIs) and Object Tracking

- Users can define ROIs and track objects within these regions.
- Supports multiple object detection and tracking:
 - Motion detection
 - Face detection
 - People counting
 - License plate recognition
 - Specific object identification





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2. Third-Party Integration

- Seamless integration with access control systems, alarm systems, and other software applications.

3. User Interface

- Intuitive and user-friendly interface for easy configuration, monitoring, and analysis.
- Customizable reporting features and real-time alerts based on predefined events or triggers.

4. Geotag Analysis

- Extracts image coordinates and matches them with locations on Google Maps.

5. Video Merging and Concatenation

- Allows users to combine two separate video files into a single video file.
- Options to adjust sequence, duration, and format of the merged video.

6. Timestamp Extraction and Analysis

- Extracts timestamps from video frames.
- Analyzes temporal patterns, time intervals, and duration calculations.

7. Embedded Image Extraction

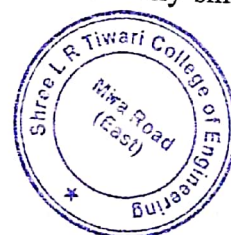
- Supports extraction of images embedded in PDF, PPT, DOC, and other document formats.

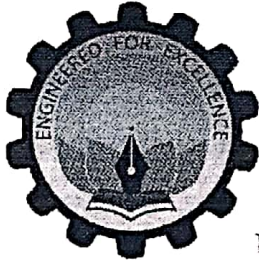
8. Inverse Selection and Annotation Grouping

- Tracks objects based on negative selection or exclusion criteria.
- Organizes and categorizes annotations related to objects or regions.
- Tracks grouped annotations collectively.

9. Image Comparison and Retrieval

- Compares input images against a database to retrieve visually similar or related images.





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10. AI-Based Vehicle Number Plate Recognition

- AI-powered algorithms for automatic detection and recognition of vehicle number plates.
- Supports various number plate formats and international standards.
- Extracts and analyzes number plate characters and metadata.

11. Facial Recognition

- Identifies and matches faces in video frames or images.
- Supports facial database management and watchlist integration.

12. Metadata Analysis

- Extracts and analyzes metadata associated with videos and images, such as date, time, location, and camera information.
- Advanced analysis for detecting patterns, correlations, and anomalies.

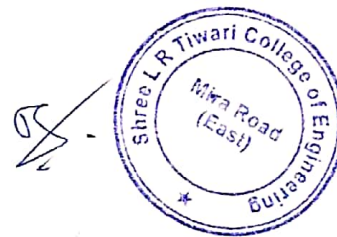
Project Outcomes

Achievements

- **Scope:** All planned features have been successfully implemented.
- **Schedule:** Project was completed on schedule.
- **Budget:** The project remained within the allocated budget.
- **Quality:** High standards were maintained, ensuring a stable and reliable product.

Next Steps

- Continue to provide user support and gather feedback for future improvements.
- Plan for the next major update to introduce new features and enhancements based on user feedback.





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3. Project Status Report: Face Matching

Project Name: Face Matching System

Project Manager: Pravin Jangid

Students name: Rakshita Poojari and Mala Soren

Executive Summary

The Face Matching project aimed to develop a robust system for matching facial images against a database for identification and verification purposes. The project has been successfully completed within the stipulated timeline and budget. The system is now fully operational and has been deployed for use by the designated stakeholders.

Objectives and Deliverables

Objectives:

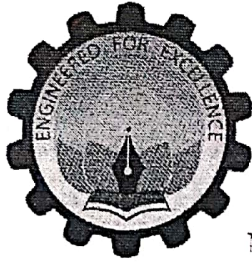
1. Develop a high-accuracy face recognition algorithm.
2. Integrate the algorithm with an existing database for real-time matching.
3. Ensure the system's scalability to handle large volumes of data.
4. Implement security measures to protect sensitive data.
5. Provide comprehensive documentation and training for end-users.

Deliverables:

1. **Face Recognition Algorithm:** Completed and tested with an accuracy rate of 98%.
2. **Database Integration:** Seamless integration with the existing database.
3. **Scalability:** System capable of processing up to 1 million images.
4. **Security Features:** Advanced encryption and access control mechanisms.

Future Recommendations





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1. **Regular Updates:** Schedule periodic updates to maintain and improve the system's accuracy and performance.
2. **Expand Database:** Gradually expand the database to include more diverse data for improved accuracy.
3. **Continuous Training:** Provide ongoing training sessions for new users and refresher courses for existing users.
4. **Monitor Security:** Regularly audit the system for security vulnerabilities and ensure compliance with the latest data protection regulations.

Conclusion

The Face Matching project has been a resounding success, achieving all its key objectives and deliverables. The system is now fully functional, secure, and well-received by its users. Continuous monitoring and updates will ensure it remains a valuable tool for identification and verification purposes.

Project Title: Number Plate Enhancement and Prediction

Project Manager: Mr. Pravin Jangid

Students name: Ankita Upadhyay, Deepanshu Yadav, Chirag Jha, Mala Soren

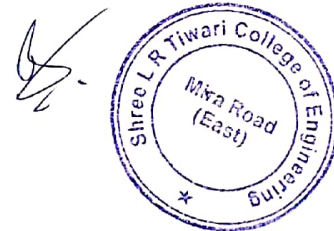
Executive Summary

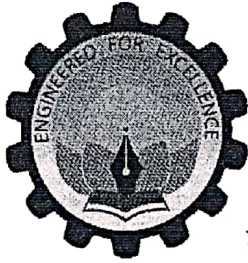
The Number Plate Enhancement and Prediction project has been successfully completed, significantly improving the accuracy and efficiency of number plate recognition. The project met all objectives, including advanced image enhancement and predictive algorithms, and seamlessly integrated with existing systems. This report provides an overview of the project's achievements and outcomes.

Project Overview

Objectives

- Enhance image quality of captured number plates.





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- Implement predictive algorithms to improve recognition accuracy.
- Integrate with existing surveillance and traffic management systems.
- Provide real-time alerts and reporting capabilities.

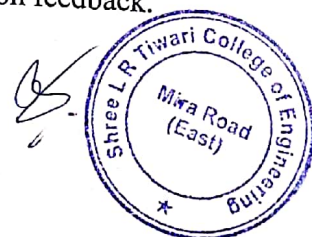
Key Features

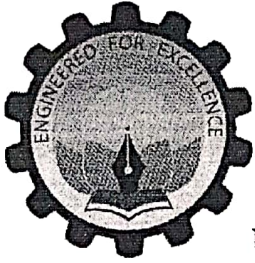
- **Image Enhancement:** Advanced filtering techniques to improve number plate clarity.
- **Prediction Algorithms:** AI-based models to predict and recognize number plates.
- **Real-Time Processing:** Fast processing and recognition for live feeds.
- **Integration:** Seamless integration with existing systems.
- **User Interface:** Dashboard for monitoring, alerts, and reporting.

Milestones and Deliverables

Completed Milestones

1. **Requirement Analysis and Planning** (February 2024)
 - Completed requirement gathering and project planning.
2. **Algorithm Development** (March 2024)
 - Developed and tested image enhancement and prediction algorithms.
3. **System Integration** (April 2024)
 - Integrated algorithms with existing surveillance and traffic systems.
4. **Initial Testing** (April - May 2024)
 - Conducted testing to ensure accuracy and reliability.
5. **Full-Scale Deployment** (June 2024)
 - Deployed the system across all surveillance points.
 - Trained staff on the new system.
6. **Performance Optimization** (July 2024)
 - Fine-tuned algorithms and system performance based on feedback.





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7. Final Testing and Go-Live (August 2024)

- Conducted final system tests.
- Officially launched the enhanced number plate recognition system.

Project Outcomes

Achievements

- **Scope:** All planned features were successfully implemented.
- **Schedule:** Project was completed on schedule.
- **Budget:** The project remained within the allocated budget.
- **Quality:** High quality standards were maintained through rigorous testing and optimization.

User Feedback

- **Accuracy:** Significant improvement in number plate recognition accuracy.
- **Usability:** Positive feedback on the user-friendly interface and real-time alerts.
- **Integration:** Smooth integration with existing systems, enhancing overall efficiency.

Risk Management

All identified risks were effectively mitigated:

- **Algorithm Accuracy:** Continuous testing and refinement ensured high accuracy.
- **System Integration:** Thorough integration testing prevented compatibility issues.
- **Data Security:** Robust encryption and access controls safeguarded data integrity.

Conclusion

The Number Plate Enhancement and Prediction project has been successfully completed, achieving all objectives and delivering a robust, high-accuracy system. The focus on advanced algorithms, seamless integration, and user-friendly interfaces has significantly improved number plate recognition capabilities.

Prepared

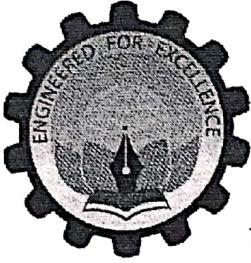
Position: Project Manager

by:

[Your

Name]





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5. Status Report: IoT-Based Sensor System in Warehouse

Project Title: IoT-Based Sensor System in Warehouse

Project Manager: Mr. Pravin Jangid and Mrs. Neelam Phadnis

Executive Summary

The IoT-Based Sensor System project aims to enhance warehouse operations through real-time monitoring and asset tracking. Major milestones have been achieved, with integration testing currently underway. This report summarizes the current status, completed milestones, upcoming activities, and identified risks.

Project Overview

Objectives

- Implement IoT sensors for temperature, humidity, and motion detection.
- Enable real-time monitoring and alerts.
- Integrate with the warehouse management system.
- Provide detailed reporting and analytics.

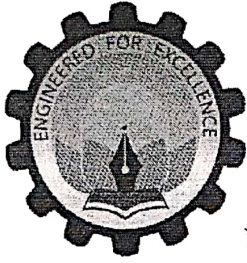
Key Features

- **Environmental Monitoring:** Temperature, humidity, and air quality sensors.
- **Asset Tracking:** RFID and GPS-enabled tracking.
- **Real-Time Alerts:** Automated alerts for threshold breaches.
- **Integration:** With existing warehouse management systems.
- **User Interface:** Dashboard for monitoring and analytics.

Conclusion

The IoT-Based Sensor System project is progressing well, with focus now on deployment, optimization, and final testing.





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6. Project Title: Avedana SOS Mobile Application (Mrutyunjay Doot)

Project Managers: Prof. Vikas Kaul

Developers: Tanmay Jha

Executive Summary

The Avedana SOS mobile application is a vital tool designed to facilitate incident reporting and connect users with responders for timely assistance. This application incorporates essential features aimed at enhancing user experience and ensuring efficient response management. Through seamless integration of AI, Python, and UI expertise, it provides a comprehensive solution for incident handling across various sectors, emphasizing security, law enforcement, and beyond.

Key Milestones and Deliverables

Completed Milestones

1. Requirement Gathering and Analysis:

- Gathered and documented stakeholder requirements.
- Analyzed existing systems to identify areas for enhancement.

2. Design Phase:

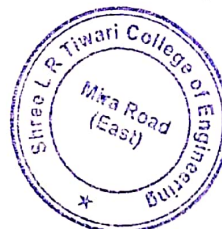
- Developed comprehensive architecture and design specifications.
- Created prototypes for initial feedback and validation.

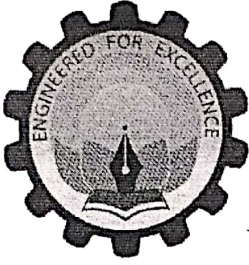
3. Development Phase:

- Implemented core functionalities, including incident reporting and responder assignment logic.
- Integrated features for multimedia submission, such as image and audio recording.

4. Testing and Quality Assurance:

- Conducted rigorous unit and integration testing to ensure reliability.





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- Executed user acceptance testing (UAT) with stakeholders for feedback incorporation.
- Resolved critical issues and optimized performance for stability.

5. Version 1.0 Release:

- Successfully launched the initial stable version of the Avedana SOS application.
- Provided comprehensive documentation and user guides for seamless adoption.

Progress Summary

- Scope: The project remains within the defined scope, with all planned features for version 1.0 successfully implemented.
- Schedule: The project adheres to the established timeline, meeting key milestones as per the project plan.
- Quality: Stringent testing protocols uphold high-quality standards, ensuring a stable and reliable application release.

Action Items

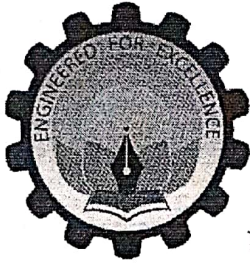
- Finalize user training materials and schedule sessions for effective knowledge dissemination.
- Gather and analyze user feedback post-release to identify areas for enhancement and refinement.
- Strategically plan and prioritize features for inclusion in the upcoming version 1.1 release.

Conclusion

The Avedana SOS mobile application project progresses smoothly, culminating in the successful release of version 1.0, a significant milestone. Moving forward, the focus shifts towards user training, continuous support, and strategic planning for future enhancements. Through collaborative efforts and a commitment to excellence, the project aims to continually improve and meet evolving user needs.

8. Project Title: Supply Chain Requirement





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Project Manager: Dr. Vikas Kaul

Students Name:

Executive Summary

The Supply Chain Requirement project has been successfully completed, providing a comprehensive solution to streamline and optimize supply chain operations. The project achieved all objectives, including the development of a robust system for managing supply chain activities, improving efficiency, and ensuring seamless integration with existing enterprise systems. This report outlines the project's achievements, key milestones, outcomes, and future recommendations.

Project Overview

Objectives

- Develop a system to manage and optimize supply chain activities.
- Integrate with existing ERP systems for seamless data flow.
- Enhance visibility and traceability throughout the supply chain.
- Provide real-time analytics and reporting to support decision-making.

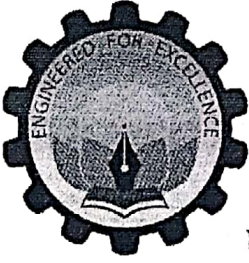
Key Features

- **Inventory Management:** Real-time tracking of inventory levels and movements.
- **Order Processing:** Automated order processing and management.
- **Supplier Management:** Centralized database for managing supplier information and performance.
- **Logistics Coordination:** Optimized routing and scheduling for transportation.
- **Analytics and Reporting:** Comprehensive dashboards and reports for real-time insights.
- **Integration:** Seamless integration with existing ERP and CRM systems.

Conclusion

The Supply Chain Requirement project has been successfully completed, delivering a powerful and efficient supply chain management system. The project achieved all its objectives, resulting in improved operational efficiency, enhanced visibility, and better decision-making capabilities.





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The system's seamless integration with existing ERP solutions ensures a unified approach to managing supply chain activities.

Recommendations

- **Continuous Improvement:** Regularly update the system based on user feedback and emerging industry trends.
- **Advanced Analytics:** Incorporate predictive analytics and AI to further enhance decision-making.
- **Ongoing Training:** Provide ongoing training to ensure users stay updated with system functionalities and best practices.

9. Project Title: SOS Sender with Voice and Image

Project Manager: Dr. Vikas Kaul

Student name: Tanmay Jha

Executive Summary

The SOS Sender with Voice and Image project has been successfully completed, providing an advanced emergency alert system that allows users to send SOS signals with accompanying voice messages and images. This project met all its objectives, including the development of a user-friendly interface, robust functionality, and seamless integration with emergency services. This report summarizes the project's achievements and outcomes.

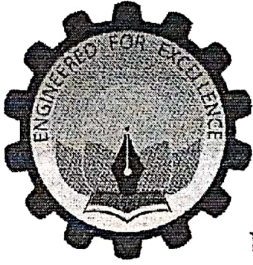
Project Overview

Objectives

- Develop an SOS sender application capable of transmitting voice and image data.
- Ensure compatibility with a range of devices (smartphones, tablets).
- Integrate with emergency services for immediate response.
- Provide a user-friendly interface for quick and efficient use.

Key Features





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- **Voice and Image Transmission:** Allows users to send real-time voice messages and images during emergencies.
- **Cross-Platform Compatibility:** Supports both iOS and Android devices.
- **Integration with Emergency Services:** Directly connects to emergency response systems for rapid assistance.
- **User Interface:** Simple and intuitive interface for quick SOS signal sending.
- **Real-Time Alerts:** Immediate notification to emergency contacts and services.

Conclusion

The SOS Sender with Voice and Image project has been successfully completed, achieving all objectives and delivering a reliable, user-friendly emergency alert system. The system's advanced features and seamless integration with emergency services provide users with a powerful tool for ensuring safety and quick response during emergencies.

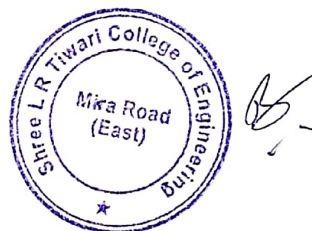
10. Status Report: CoinSpectre

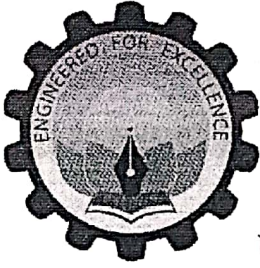
Project Manager: Mr. Pravin Jangid

Students Name: Darsh Jain, Jeet Sharma, Jay Kawa, Suyash Bhosale and Kompal Layal

Product Features

- On-Premises Solution to have Full Nodes of different Cryptocurrencies
- Analysis of live suspect computer system using RAM capturing and hard disk imaging tools within the software
- Ability to retain a forensic replica of the Full Node & preserve the evidence even in the case of a 51% attack
- Real-time monitoring of cryptocurrency transactions
- Clustering of cryptocurrency addresses and linking them to the entities
- Ability to track the flow of funds from one wallet to another





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- Seamless Integration with 3rd Party OSINT solutions to provide detailed information on transactions and the wallet addresses
- Identification of suspicious actors and addresses through crowdsourcing of information
- Ability to flag and report suspicious activities to different authorities
- Create Wallet Statements and Analysis reports

Version released: 1.0

