Project : Crowdsourced Crime Reporting System

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Team Members-

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Description:

The Crowdsourced Crime Reporting System is a platform that empowers citizens to report crime incidents or suspicious activities in their locality. It serves as a bridge between the public and authorities, enabling real-time tracking, alerts, and mapping of crime incidents. With a focus on user anonymity and data privacy, the system also provides authorities with actionable insights to tackle crime effectively.

Workflow for Crowdsourced Crime Reporting System

**Step 1: Requirement Analysis and Planning**

* Identify user needs for reporting incidents and viewing crime data.
* Define system requirements: data privacy, real-time alerts, and mapping.
* Finalize the tech stack for backend, frontend, and database.
* Assign roles: crime report creation, mapping, database management, and UI design.

**Step 2: System Design**

* System Architecture: Plan the interaction between users, backend, database, and mapping services.
* Database Design: Define tables for crime reports, user details, and location data.
* UI Design: Create wireframes for user and authority interfaces.

**Step 3: Crime Report Creation**

* Develop a user-friendly form for submitting reports.
* Include fields for location, type of crime, severity, and optional multimedia evidence.
* Ensure data validation and allow anonymous submissions.

**Step 4: Mapping and Location-based Features**

* Integrate a mapping API (e.g., Google Maps, Leaflet).
* Plot crime incidents on a map for visualization.
* Implement geofencing to send alerts based on user location.

**Step 5: Backend Development**

* Create APIs for report submission, retrieval, and alerts.
* Implement logic for location-based incident categorization.
* Ensure secure and scalable data handling.

**Step 6: Database Implementation**

* Design tables to store crime reports, user data, and analytics.
* Optimize queries for retrieving location-based crime data.
* Implement user anonymity and encryption for sensitive information.

**Step 7: Frontend Development**

* Build a responsive interface for users to submit reports and view crime hotspots.
* Design a dashboard for authorities with filters and analytics.
* Use data visualization libraries for hotspot mapping and trends.

**Step 8: Testing**

* Conduct unit testing for report submission, mapping, and database interactions.
* Test for system vulnerabilities to ensure privacy and data security.
* Conduct user testing for intuitive design and usability.

**Step 9: Deployment and Maintenance**

* Deploy the system on a secure cloud platform.
* Monitor the system for real-time issues and scalability.
* Regularly update features based on user feedback and emerging needs.

**Goals:**

* Enable citizens to report crimes easily and anonymously.
* Provide authorities with real-time alerts and insights.
* Utilize mapping and visualization to identify and address crime patterns.

**Deliverables:**

* A secure platform for reporting and visualizing crime incidents.
* An interactive dashboard for authorities with analytics and filters.
* Real-time alert system for critical incidents.

**Flowchart:**

