### **Milestone 1: Core Infrastructure and User Identity (1 week)**

* **Objectives:**
  1. Set up the development environment and repository.
  2. Implement initial onboarding UI/UX.
  3. Set up the foundational architecture for a decentralized app.
  4. Implement the cryptographic identity system.
* **Tasks:**
  1. Generate unique cryptographic key pairs for user identity.
  2. Implement secure storage for private keys on the device.
  3. Enable public key sharing via QR codes or links.
  4. Develop a simple sign-up process and restore backup functionality.
* **Deliverables:**
  1. Working identity generation and storage.
  2. QR code-based key exchange.

### **Milestone 2: Peer-to-Peer Communication Framework (2-3 days)**

* **Objectives:**
  + Enable P2P communication between devices.
* **Tasks:**
  + Implement Bluetooth and Wi-Fi Direct communication protocols for offline connections.
  + Integrate basic P2P networking libraries (e.g., Libp2p) for internet-based communication.
  + Establish a secure connection handshake using public/private keys.
* **Deliverables:**
  + Devices can discover each other and exchange encrypted messages.

### **Milestone 3: Main Chat Functionality (2-3 days)**

* **Objectives:**
  + Develop one-on-one messaging with offline support.
* **Tasks:**
  + Build the chat interface (UI/UX).
  + Implement message encryption/decryption using the Double Ratchet Algorithm.
  + Add local message queuing for offline users.
  + Store chat history securely using SQLite.
* **Deliverables:**
  + Fully functional main chat section with message queuing and offline capabilities.

### **Milestone 4: Group Chats (1-2 days)**

* **Objectives:**
  + Extend messaging to support group communications.
* **Tasks:**
  + Develop group creation and management features (add/remove members).
  + Implement group messaging with secure key distribution.
  + Handle group message synchronization when users reconnect.
  + Use Wi-Fi Direct multicast or individual Bluetooth connections for nearby group members.
* **Deliverables:**
  + Peer-to-peer group messaging with offline handling and synchronization.

### **Milestone 5: Polls and Events (2-3 days)**

* **Objectives:**
  + Add functionality for creating, sharing, and responding to polls and events.
* **Tasks:**
  + Design UI/UX for poll and event creation.
  + Enable poll response collection and aggregation.
  + Implement local storage and syncing for poll results and event updates.
  + Add RSVP handling and reminders for events.
* **Deliverables:**
  + Polls and events feature with offline creation and synchronization.

### **Milestone 6: Feeds Section (2-3 days)**

* **Objectives:**
  + Create a feed section for user-generated content.
* **Tasks:**
  + Build the feed display for text, images, and links.
  + Implement local storage of posts and reactions (likes, comments).
  + Integrate IPFS for decentralized media storage.
  + Enable syncing of feed updates between peers.
* **Deliverables:**
  + Functional feed section with offline and online syncing capabilities.

### **Milestone 7: Testing and Optimization (1-2 days)**

* **Objectives:**
  + Ensure the app is stable, fast, and user-friendly.
* **Tasks:**
  + Conduct rigorous testing of Bluetooth, Wi-Fi Direct, and internet communication.
  + Optimize for battery and resource efficiency.
  + Refine UI/UX based on feedback.
* **Deliverables:**
  + Fully tested and optimized app ready for deployment.