# Project Name:

## AI-Powered Email Cleanup and Management Tool

### Project Overview:

The AI-powered email cleanup and management tool is designed to help users manage and organize their inboxes more efficiently. By leveraging AI, the tool will categorize emails, generate automated responses, summarize long emails, and suggest actions like archiving, deleting, or unsubscribing from newsletters.

### Core Features:

1. **User Authentication:**
   * Implement Google OAuth 2.0 for secure user login.
   * Allow users to grant permission to access their email inboxes.
2. **Email Categorization:**
   * Use OpenAI’s API to categorize emails into various groups (e.g., Work, Social, Promotions, Spam, Important).
   * Highlight important emails and suggest actions for less relevant ones.
3. **Bulk Actions:**
   * Enable users to perform bulk actions like archiving, deleting, or marking emails as read, based on AI suggestions.
   * Provide a one-click option to clear out entire categories like "Promotions" or "Social" emails.
4. **Smart Filters and Labels:**
   * Automatically apply labels to incoming emails based on content and sender.
   * Suggest smart filters to automatically move emails into folders or apply labels.
5. **Automated Responses:**
   * Provide AI-generated response templates for common emails (e.g., meeting requests, customer inquiries).
   * Allow users to customize and approve these responses before sending.
6. **Unsubscribe Feature:**
   * Detect and list all newsletters and promotional emails.
   * Provide an option to unsubscribe directly from within the tool.
7. **Email Summarization:**
   * Generate concise summaries of long emails to help users quickly understand the key points.
   * Offer daily or weekly email summaries, highlighting important emails.
8. **Task Scheduler for Email Cleanup:**
   * Implement a task scheduler to automatically clean up old emails based on user-defined rules (e.g., delete emails older than 6 months).
9. **User Profile and Settings:**
   * Allow users to customize their experience (e.g., categories, filters, automation rules).
   * Store user preferences securely.
10. **Data Security and Privacy:**
    * Implement strong encryption for sensitive data.
    * Ensure compliance with data protection regulations (e.g., GDPR, CCPA).

### Technology Stack:

1. **Frontend:**
   * React.js
   * Tailwind CSS
   * Axios (for API requests)
   * TypeScript (optional)
2. **Backend:**
   * Node.js with Express.js
   * MongoDB (with Mongoose)
   * Passport.js for authentication
   * Google Gmail API and OAuth 2.0
   * OpenAI API
3. **Deployment and DevOps:**
   * Docker for containerization
   * AWS (EC2, S3, RDS) for hosting
   * CI/CD pipeline (GitHub Actions)

### Project Goals:

1. **Usability:**  
   Create an intuitive and user-friendly interface that makes managing emails straightforward and efficient.
2. **Automation:**  
   Reduce the manual effort required to manage emails by automating common tasks like categorization, summarization, and cleanup.
3. **Security:**  
   Ensure that user data is handled securely, with robust encryption and compliance with data protection regulations.
4. **Scalability:**  
   Design the application to scale easily, accommodating growing user bases and increasing volumes of emails.
5. **Monetization:**  
   Implement a freemium model, with basic features available for free and advanced features behind a subscription paywall.