Feasibility Document

Project: AI Expense Tracker

1. Introduction

This document evaluates the feasibility of developing a secure and feature-rich **AI Expense Tracker** using the **MERN Stack** (MongoDB, Express, React, Node.js). The system includes features like AI receipt scanning, recurring transactions, and advanced analytics.

The study considers technical, operational, economic, legal, and scheduling aspects to ensure the project can be successfully implemented

2. Technical Feasibility

- **Technology Stack:** MERN **Stack** is highly mature and well-supported for building modern web applications.
- **AI Integration: Optical Character Recognition (OCR)** or specialized AI services (like cloud-based vision APIs) can be integrated with the Node.js backend to handle the **Upload & Scan Receipt** feature.
- **Infrastructure:** Cloud services (AWS, GCP, Azure) or affordable standard hosting can provide scalable computers and storage for the MongoDB database and application servers.
- **Feasibility Verdict: Technically feasible** with current open-source tools, established frameworks, and available cloud infrastructure.

3. Economic Feasibility

- **Development Cost: Moderate to High**, driven primarily by the complexity of the AI/OCR integration and the development of the **Recurring Transactions** cron job and message report automation. The MERN stack uses open-source components, keeping library costs low.
- **Operational Cost:** Primarily involves cloud hosting fees, potential subscription costs for third-party OCR/AI APIs, and message service fees for the **Auto-Generated Monthly Report**.
- **Return on Investment (ROI): High potential ROI** through subscription models or enhanced productivity for small business users, justifying the initial investment.
- **Feasibility Verdict: Economically viable** with costs concentrated on specialized feature development and recurring operational expenses.

4. Operational Feasibility

- **User Adoption:** High likelihood of adoption by individuals and small businesses seeking to automate finance tracking, especially due to the unique **AI Receipt Scan** and **Auto-Generated Monthly Report** features.
- **Ease of Use:** A **React-based dashboard** ensures a modern and **User-friendly Interface** for creating transactions, viewing analytics, and managing settings.
- **Integration:** Can easily integrate with third-party message services and potentially future bank APIs (though not initially scoped) or function as a standalone financial health tool.
- **Feasibility Verdict: Operationally feasible** with strong potential for user satisfaction due to clear benefits like time saving and accurate financial insights.

5. Legal Feasibility

- **Data Compliance:** Must comply strictly with data privacy regulations (e.g., GDPR, CCPA) regarding the storage of personal financial information. **User Data Security** is paramount.
- **Authentication & Security:** Must ensure the security of the **Authentication (Email + Password with JWT)** system and encrypt sensitive transaction data in MongoDB.
- **Financial Disclaimer:** Even though it's an expense tracker, a clear disclaimer is needed that the **Advanced Analytics** and reports are for informational purposes only and not financial advice.
- **Feasibility Verdict: Legally feasible** if robust security practices and privacy compliance measures are strictly followed and appropriate disclaimers are in place.

6. Schedule Feasibility

- Estimated Timeline:
    1. Authentication & Core CRUD (Transactions): **2–3 weeks**
    2. AI Receipt Scan Integration (POC & Implementation): **3–4 weeks**
    3. Advanced Analytics & Dashboard (MongoDB Aggregate Pipeline): **3–4 weeks**
    4. Recurring Transactions (Cron Job) & message Report Setup: **3–4 weeks**
    5. Testing, CSV Import, and Deployment: **1–2 weeks**
- **Total Duration: 3-4 months.**
- **Feasibility Verdict:** Project can be completed within a reasonable timeframe, with the AI and core backend logic requiring the most significant time allocation.

7. Conclusion

The **AI Expense Tracker with MERN Stack** project is **feasible** across all major dimensions. The combination of a strong technical foundation (MERN Stack), high potential user adoption, and clear business value makes this project both practical and highly beneficial for the target user base.