PulseBoard SaaS - Document Upload & Spending Analysis

High-Level Summary

PulseBoard should allow users to upload documents such as invoices, receipts, bank statements, and credit card summaries. Once uploaded, the system should parse the content and extract key financial data like vendor, amount, category, and date. That data should be analyzed to show a visual summary of monthly spending, top vendors, unusual spikes, and potential financial leaks.

1. Upload Functionality

Users should be able to upload files from their dashboard into a module called something like 'Spending Analyzer' or 'Document Vault'. The upload area should:

- Accept file types: PDF, CSV, XLSX, JPG/PNG
- Allow drag-and-drop or click-to-upload
- Auto-tag each document with the upload date, type, and source (bank/invoice/receipt/etc.)
- Optional: let the user assign a tag or category if desired (e.g., Rent, Payroll, Tools).

2. Parsing & Data Extraction

After upload, the backend should parse the document and extract relevant data using an OCR/text parser:

- For receipts/invoices: extract Vendor Name, Total Amount, Date, Line Items (if available), Payment Method
- For bank/credit card statements: extract Date, Description, Category (auto or AI-assisted), Amount (debit/credit)

Store parsed data in a structured format in the database under that user's tenant.

Suggested tools: pdfplumber, Pandas, Tabula, Tesseract OCR, AWS Textract, Google Document AI, or GPT-4 function calling.

3. Analysis Prompt (Spending Dashboard)

Once the data is extracted, run analytics on it to show:

- Total spend for the month
- Top 5 vendors by amount
- Categories (e.g., Payroll, Subcontractors, Equipment, Travel)

- Trendlines month-over-month
- Flagged anomalies: 'Unusual spend compared to average', 'Duplicate vendor payments'

Allow users to:

- Filter by month, category, vendor
- Download a summary report
- Click any bar/pie chart to see underlying transactions

4. Financial Leak Alerts

Build a rules engine or use simple thresholds to flag:

- Large increases in specific categories
- Duplicate payments
- Unusual spend patterns
- Recurring charges that increased

Example Workflow

1. User uploads a PDF invoice and a CSV bank statement.
2. System extracts the data and shows a preview.
3. It automatically categorizes spend and flags $5,000 on Fuel (twice the normal).
4. The dashboard updates to show a spike in Fuel and recommends reviewing vendor contracts.
5. User can click the spike to see all fuel-related receipts and transactions.
6. They can export this as a PDF report for their accountant or CFO.

Developer Prompt Template

Build a document upload + parsing system that extracts key spend data from invoices, receipts, and bank statements. Store that structured data and use it to power a dashboard showing monthly totals, top vendors, and flagged anomalies. Think of it like a simplified QuickBooks report view - but automatically generated from user-uploaded files.