**DocVerify: Local Setup Guide for Beginners**

**What is DocVerify?**

DocVerify is a document verification application that uses AI to detect fake, altered, or AI-generated documents. The system analyzes uploaded images and documents, providing detailed verification results to help users identify potential issues.

**Tech Stack Overview**

**Frontend**

* **React:** A JavaScript library for building user interfaces
* **Next.js:** A React framework that enables server-side rendering and other performance optimizations
* **Tailwind CSS:** A utility-first CSS framework for rapid UI development

**Backend**

* **Next.js API Routes:** Serverless functions for handling API requests
* **Firebase:** Authentication, storage, and database services
* **Google Gemini API:** Advanced AI for document analysis and verification

**AI Components**

* **Gemini API:** Google's advanced AI model that analyzes documents for authenticity
* **Inception V3:** Specific deep learning model (CNN architecture) Image classification — telling you **what** is in an image (e.g., dog, cat, airplane).

**Setup Instructions**

**Prerequisites Make Sure You download this**

* Node.js (v16 or higher)
* npm or pnpm package manager

**Step 1: Install Dependencies**

npm install

or if using pnpm:

pnpm install

**Step 2: Run the Development Server**

The .env.local file with all necessary API keys is already included in the package.

npm run dev

or if using pnpm:

pnpm dev

**Step 3: Access the Application**

Open your browser and navigate to: http://localhost:3000

**Features**

* **Document Upload:** Upload images and documents via drag-and-drop or camera capture
* **AI Analysis:** Documents are analyzed by Google's Gemini API for authenticity
* **Verification Results:** Detailed reports showing:
  + Whether the document is likely genuine or fake
  + If the document might be AI-generated
  + Any detected anomalies or inconsistencies
  + Confidence score of the analysis

**How It Works (Simplified)**

1. User uploads a document or takes a photo
2. The image is sent to our API
3. The API extracts text from the document
4. The text and document type are sent to Google's Gemini AI
5. Gemini analyzes the content for signs of fakery or AI generation
6. Results are displayed to the user with detailed explanations

This technology helps identify potentially fraudulent documents by leveraging Google's advanced AI capabilities to detect inconsistencies that might not be visible to the human eye.