

# How to Run the Project (Local Setup)

This section provides step-by-step instructions to set up and run the **AI-Powered Form Filling Assistant for Indian Citizen Services** on a local machine for development and testing purposes.

## Backend Setup

The backend of the application is developed using **Python and Flask** and is responsible for OCR processing, AI-based entity extraction, and form auto-filling logic.

1. **Navigate to the backend directory**

Open a terminal or command prompt and move to the backend folder:

```
cd backend
```

2. **Create a virtual environment**

A virtual environment is created to isolate project dependencies:

```
python -m venv venv
```

3. **Activate the virtual environment**

Activate the environment before installing dependencies:

```
venv\Scripts\activate
```

4. **Install required dependencies**

Install all backend dependencies using the requirements file:

```
pip install -r requirements.txt
```

5. **Configure environment variables**

Create a .env file inside the backend directory and add the following configuration:

```
GROQ_API_KEY=your_groq_api_key_here
```

6. **Start the backend server**

Run the Flask application using the following command:

```
python app.py
```

7. **Backend server access**

Once started successfully, the backend server will be available at:

```
http://localhost:6001
```

## Frontend Setup

The frontend of the application is developed using **React (Vite)** and provides the user interface for document upload, form selection, review, and export.

1. **Navigate to the frontend directory**

Open a new terminal window and move to the frontend folder:

```
cd form-extractor-vite
```

2. **Install frontend dependencies**

Install all required Node.js packages:

```
npm install
```

3. **Start the frontend development server**

Launch the React development server:

```
npm run dev
```

4. **Frontend application access**

After successful startup, the frontend application will be accessible at:

```
http://localhost:5173
```

## Running the Application

- Ensure that both backend and frontend servers are running simultaneously.
- Open the frontend URL in a web browser.
- Upload an identity document (PDF/Image) to begin the form extraction and auto-filling process.