

PROJECT DOCUMENT

Project Title:

PDF Viewer Desktop App (Next.js + React + Electron.js)

1. Project Overview

The PDF Viewer Desktop App is a desktop application that allows users to upload PDF files via drag & drop or file picker and preview them instantly. Built using Next.js for UI and Electron.js for packaging into a desktop executable.

2. Tech Stack

Frontend: Next.js, React.js, Tailwind CSS

Electron: Electron.js, Electron Builder

PDF Rendering: pdf.js

3. Core Features

- Drag & drop PDF upload
- Browse & open PDF
- PDF preview using pdf.js
- Page navigation & zoom (optional)
- Package as Windows EXE via Electron

4. System Architecture

Electron loads Next.js build inside BrowserWindow.

Next.js handles UI + PDF rendering.

pdf.js handles PDF display.

5. Folder Structure

root/

■■■ electron/

```
■ ■■ main.js  
■ ■■ preload.js  
■ ■■ package.json  
■■ src/app/  
■ ■■ page.tsx  
■ ■■ components/  
■ ■■ DropZone.tsx  
■ ■■ PDFViewer.tsx  
■ ■■ Header.tsx  
■■ public/pdf.worker.js  
■■ package.json  
■■ next.config.js
```

6. Development Phases

Phase 1: Next.js setup with Tailwind

Phase 2: Drag & Drop Upload

Phase 3: PDF.js Viewer

Phase 4: Electron Integration

Phase 5: Build EXE

7. Functional Requirements

- Drag & drop upload
- File browsing upload
- PDF preview
- Page navigation
- Zoom
- EXE packaging

8. UI Layout

- Header
- Drag zone
- File button
- PDF preview area

9. AI Prompting Steps

- Step 1 — Create Next.js project
- Step 2 — Create folder structure
- Step 3 — Create DropZone component
- Step 4 — Create PDFViewer using pdf.js
- Step 5 — Combine UI
- Step 6 — Add Electron
- Step 7 — Add packaging
- Step 8 — Final review

10. Expected Output

- Complete Next.js project
- PDF Viewer UI
- Working Electron desktop app
- Windows EXE builder configured