

MedScope.AI - Prototype Version 1.0

Overview

MedScope.AI is a prototype web application designed to analyze medical documents using AI. It allows users to upload medical reports, test results, and scan images (e.g., X-ray, CT, MRI) and receive AI-generated summaries, diagnoses, and visual heatmaps. Built with a React frontend and FastAPI backend, this tool demonstrates an AI-driven diagnostic assistant for healthcare contexts.

Tech Stack

- Frontend: React.js, Tailwind CSS
- Backend: FastAPI (Python)
- NLP Model: Summarization using Transformers (e.g., BART/LED)
- OCR Engine: Tesseract (via pytesseract)
- Image Model: Custom/pre-trained X-ray classifier with heatmap
- PDF: jsPDF
- Deployment: Local (can be deployed to GCP/AWS)

Features

- User Authentication
- Upload multiple medical/test/image files
- AI-based diagnosis & summarization
- Animated loading screen with progress bar
- Report viewer with pagination
- Single & bulk PDF download

Backend Endpoints

- /upload/medical-report: Analyzes medical report files (PDF/TXT)
- /upload/test-report: Processes test report PDFs

- /upload/image: Processes and diagnoses scan images

UI Highlights

- Clean navbar (Upload | About | Contact | Sign Out)
- Animated heart loader
- Responsive result cards with download options

Future Improvements

- Secure login & session
- Database for persistent storage
- Enhanced summarization models
- Multi-user support
- Docker/GCP/AWS deployment

Version Info

Prototype Name: MedScope.AI

Version: 1.0

Frontend: React 18 + Tailwind CSS

Backend: FastAPI + Python 3.10+

Status: Working prototype (local dev)