Machine Protocol Recommendation for Technicians

Objective

To assist radiology technicians in selecting the correct scan protocols, planning steps, and sequences during imaging procedures such as MRI and CT, using an AI-based recommendation system. This enhances decision-making, reduces errors, and streamlines workflow.

Target Users

Radiology technicians and imaging staff responsible for planning MRI and CT procedures.

Input and Output

- **Input:** Free-text string entered by the technician (e.g., "MRI brain", "CT abdomen with contrast").
- **Output:** Structured JSON format containing:
  - Recommended imaging protocol
  - Suggested scan sequences
  - Additional planning notes or protocol link

AI Model Functionality

- Trained to understand natural language inputs related to body parts or suspected conditions.
- Provides structured recommendations based on best practices and clinical standards.
- Returns links to relevant protocols for technician reference.
- Designed to assist—not replace—technician expertise.
- Includes a disclaimer: *"This is an AI-generated output."*

Workflow Integration

- The system will be integrated into your existing ERP platform via an API.
- Automated pipeline:
  1. Technician inputs the scan request.
  2. AI processes the request and returns recommendations.
  3. Output is displayed to the technician in real-time within the ERP system.

System Architecture Overview

Technician Input → ERP System → API Call to AI → JSON Output → Display in ERP

Benefits and Clinical Impact

- Faster and more accurate scan planning
- Supports new or junior technicians in decision-making
- Improved standardization of imaging protocols across the organization
- Reduces dependency on manual lookup or prior experience
- Ensures more consistent imaging quality and better diagnostic outcomes

Summary

An AI-powered tool that delivers real-time, structured protocol recommendations to technicians via ERP integration—enhancing efficiency, standardization, and diagnostic quality.