Inspection Automation

Problem Statement: Ensuring the accuracy of product inspections, such as shirts, through image analysis is a challenge. The goal is to develop a natural language model that can inspect products based on images and verify their correctness.

Solution Overview: Build an AI-powered bot that automates the inspection of products through image analysis. This bot will analyze images of products, verify specific features, and provide detailed inspection reports.

Key Features:

1. **Image Analysis:**
   - Analyze images of products to check specific features (e.g., buttons on a shirt).
   - Use machine vision algorithms to verify the accuracy of these features.
2. **Natural Language Queries:**
   - Allow users to describe inspection requirements in natural language.
   - Convert these descriptions into actionable inspection tasks.
3. **Detailed Reports:**
   - Generate detailed inspection reports highlighting any discrepancies or issues.
   - Provide visual annotations on the images to indicate areas of concern.

Technical Requirements:

- **Machine Vision Integration:** Incorporate advanced image analysis algorithms.
- **Natural Language Processing:** Use NLP to interpret user queries and generate inspection tasks.
- **User Interface:** Create a user-friendly interface for users to upload images and describe inspection requirements.

Deliverables:

- **Web Application:** Develop a web-based application for product inspection through image analysis.