Project: LubePilot — AI-Powered Lubrication Assistant

Overview:
LubePilot is an **AI-powered assistant** designed to support lubrication engineers and maintenance professionals in making data-driven decisions. It simplifies two major tasks in the lubrication domain:

1. **Analyzing used oil reports**
2. **Recommending suitable lubricants** for specific machinery and operating conditions.

Problem Statement:

In industries where lubrication plays a critical role in equipment reliability, engineers often face challenges such as:

- Time-consuming analysis of used oil data (viscosity, wear metals, contamination, oxidation, etc.).
- Difficulty in cross-referencing equivalent products between multiple lubricant brands like **ExxonMobil, Shell, Castrol**, and others.
- Managing large volumes of oil analysis reports from various plants or clients.

These repetitive yet crucial tasks consume valuable engineering time and can lead to human errors or delays in maintenance decision-making.

Solution — LubePilot:

LubePilot automates and enhances the decision-making process by integrating **AI-based analysis** with **lubricant recommendation intelligence**.

Key Functionalities:

- **Used Oil Report Analysis:**
  The system interprets laboratory oil analysis data and detects trends or abnormalities that indicate wear, contamination, or degradation.
- **Lubricant Recommendation:**
  Based on machine type, operating conditions, and brand preferences, it recommends the most suitable lubricant and identifies **equivalent products** across major brands.
- **Data-Driven Insights:**
  Converts complex data into easy-to-understand summaries, enabling quick maintenance decisions.

- **Multi-Brand Database:**
  Supports comparison and equivalency mapping across multiple global lubricant brands.

Technology Stack: Lovable, n8n, HTML, CSS, JavaScript

Project Tutorial: https://youtu.be/3KQfzb1AVjU