

# PillPoe Bot

## AI Assistant for Drug interactions

# Motivation

There are several avoidable medical errors because front-line clinical workers aren't able to find basic information under time pressure. This bot is motivated by the recent ruling around the death of actor Matthew Perry



The **drug**, which is approved for treatment-resistant depression, can be deadly when misused, doctors say.

Source: <https://www.foxnews.com/health/ketamine-dangers-spotlight-arrests-made-matthew-perry-death>

# How big is problem...

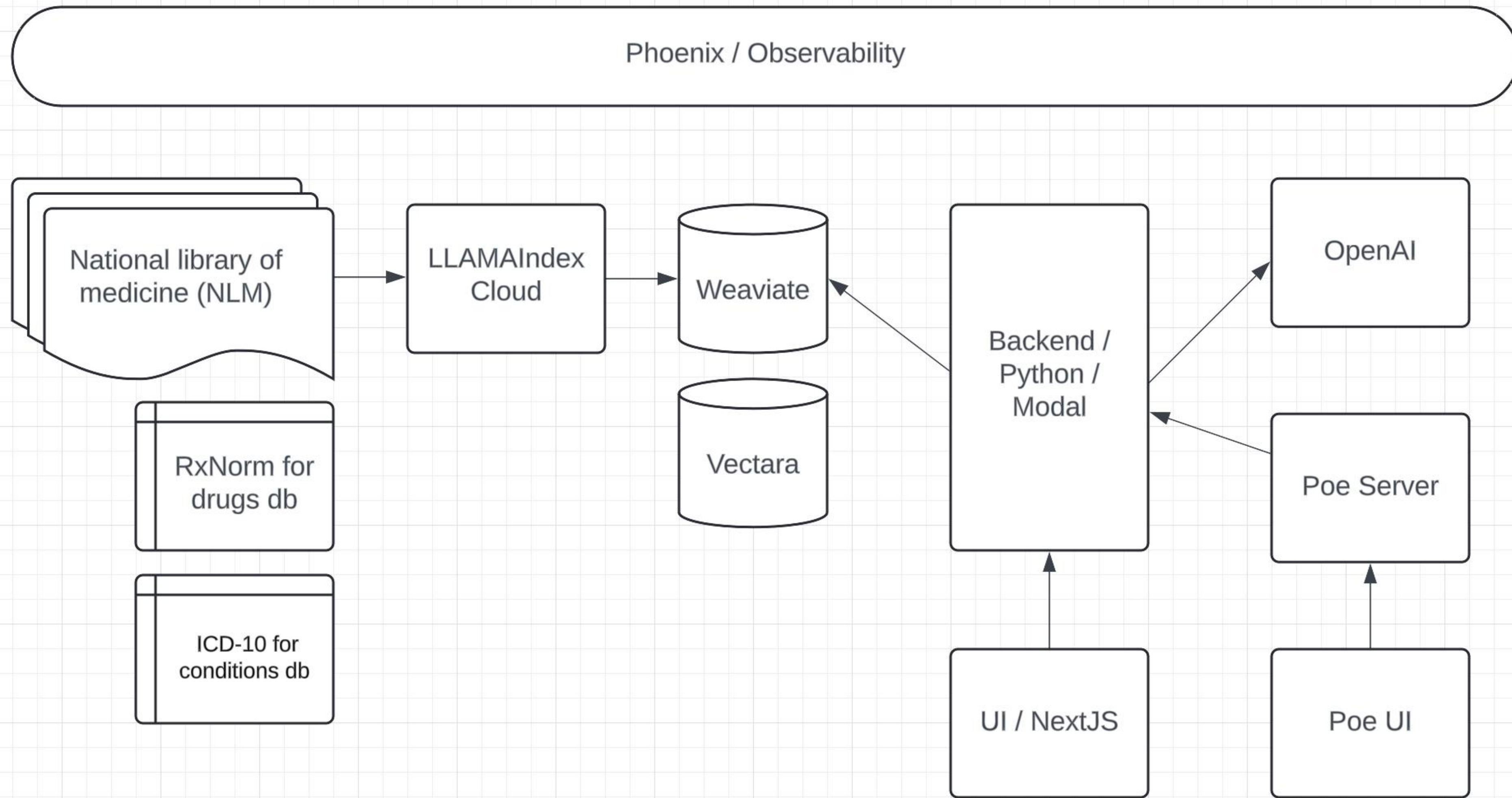
Medical errors are a leading cause of death globally. In the United States alone, medical errors are estimated to cause over **250,000 deaths** annually, making it the third leading cause of death after heart disease and cancer.

# Solution

Using Natural Language input:

- extract clinical conditions and drugs
- analyze both for interactions from authoritative sources
- present findings

# Architecture





# TEAM





# Demo

Poe Hackathon 08172024 @ AGI House

PillPoe Bot

🔍

tell about insulin diabetes

🗨️

Show events >

Insulin is a hormone that plays a vital role in regulating blood glucose levels, and it is particularly important in the context of diabetes. There are two main types of diabetes where insulin is a key factor: type 1 diabetes and type 2 diabetes.

1. **Type 1 Diabetes:** This is an autoimmune condition where the body's immune system attacks and destroys the insulin-producing beta cells in the pancreas. As a result, individuals with type 1 diabetes produce little to no insulin and require lifelong insulin therapy to manage their blood glucose levels. Insulin is administered through injections or insulin pumps 1 .

2. **Type 2 Diabetes:** In this form of diabetes, the body either becomes resistant to insulin or does not produce enough insulin to maintain normal glucose levels. Initially, lifestyle changes and oral medications may be sufficient to manage blood sugar levels, but many individuals with type 2 diabetes may eventually require insulin therapy as the disease progresses 1 .

Insulin therapy can come in various forms, including rapid-acting, short-acting, intermediate-acting, and long-acting insulins. For example, insulin glargine is a long-acting insulin that helps maintain stable blood glucose levels throughout the day and night 2 .

Overall, insulin is essential for managing diabetes, as it helps control blood sugar levels and prevents complications associated with uncontrolled diabetes, such as cardiovascular disease, nerve damage, and kidney problems 1 .

**Sources:**

sct2\_TextDefinition\_F...

RXNCONSO1.txt

1

1

2

→ What are the symptoms of diabetes?

→ How does insulin therapy work?

→ What lifestyle changes can help manage diabetes?

🔄 Regenerate

Type a message

📎

Send message

🔄 Refresh

📄 New tab

⋮

🔗 Share

# PillPoe - Your AI Pharmacist's Assistant

Query:

Male patient, 45 years old, running fever. Requesting to fill prescription with Tylenol and Vicodin.

Patient Profile

Age: 45

Gender: Male

Condition: Fever

New Medications

Tylenol (Acetaminophen) - RxNorm: 161 - NDC: 50580-0489-02

Vicodin (Hydrocodone/Acetaminophen) - RxNorm: 1049221 - NDC: 00074-3149-13

Medical Conditions

Fever - ICD-10: R50.9

PillPoeServer

Poe

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# Medical Expert System

Query:

Response:

Medications:

Tylenol (RXNorm Code: 161)

Vicodin (RXNorm Code: 2670)

Medical Conditions:

Active

Analysis:

Recommendation:



# GitHub

[https://github.com/  
sakomws/pillpoebot](https://github.com/sakomws/pillpoebot)