

PHARMAGO

Providing quick, reliable medical information using PubChem data and AI

Lablab.ai Connectivity AI Hackathon



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TEAM MEMBERS



Muhammad Danish
AI Engineer



Saqib Manzar
AI Developer



Muhammad Ali Murtaza
Software Engineer



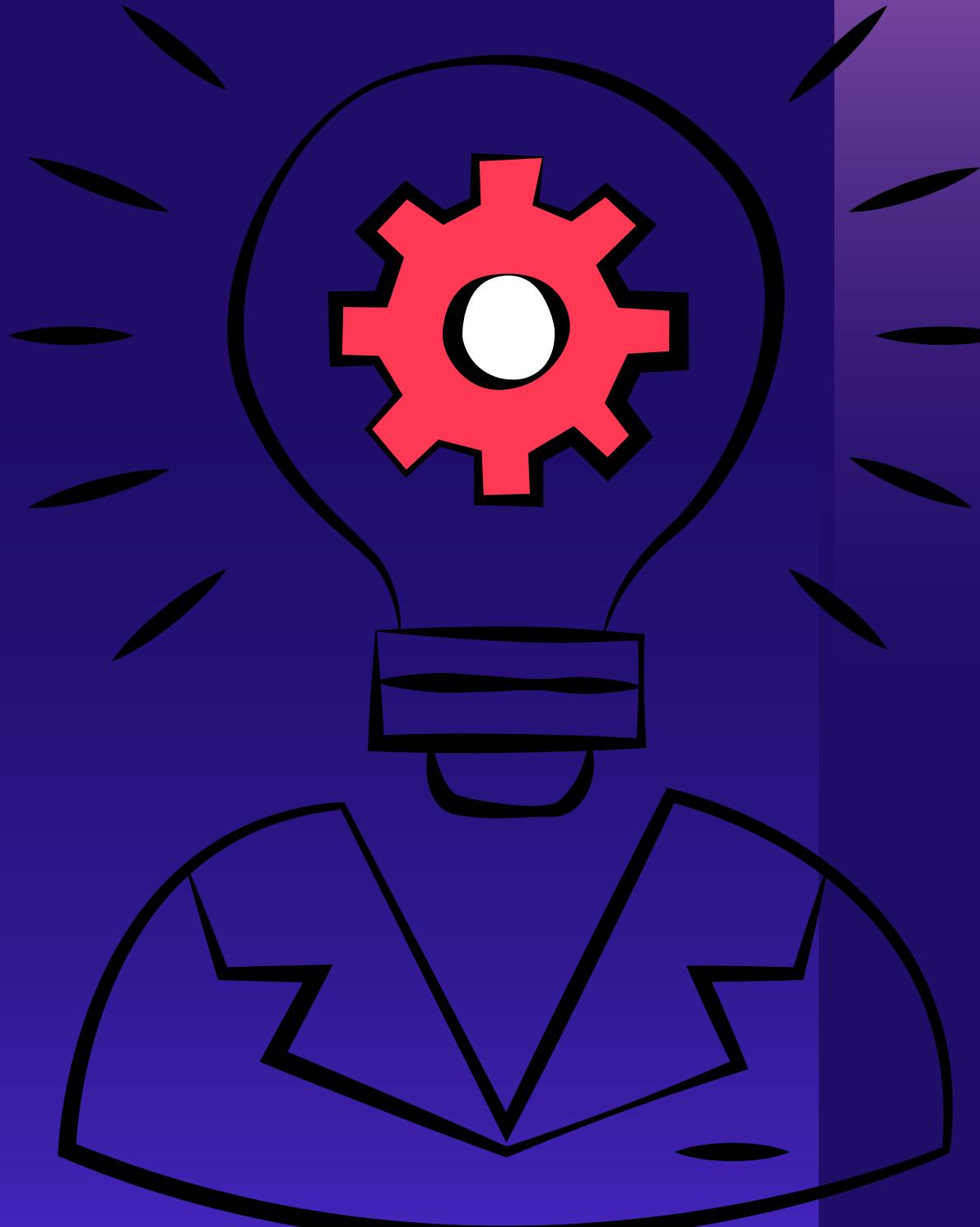
Izza Fatima
Software Engineer



Azhan Khan
Software Engineer



Ruth
Software Engineer



PROBLEM STATEMENT

- Accessing accurate information about medicines and side effects can be time-consuming and confusing
- Current resources (like Google searches) are not tailored to deliver concise and reliable answers.
- Patients often feel overwhelmed when searching for information about medicines

OBJECTIVES

- Provide quick and accurate answers to user queries about medicines, their uses, and side effects.
- Assist doctors and medical professionals by offering reliable information on drug interactions, properties, and potential alternatives.
- Simplify accessing critical drug-related data from the PubChem dataset through an AI-powered system.



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TARGETED AUDIENCE

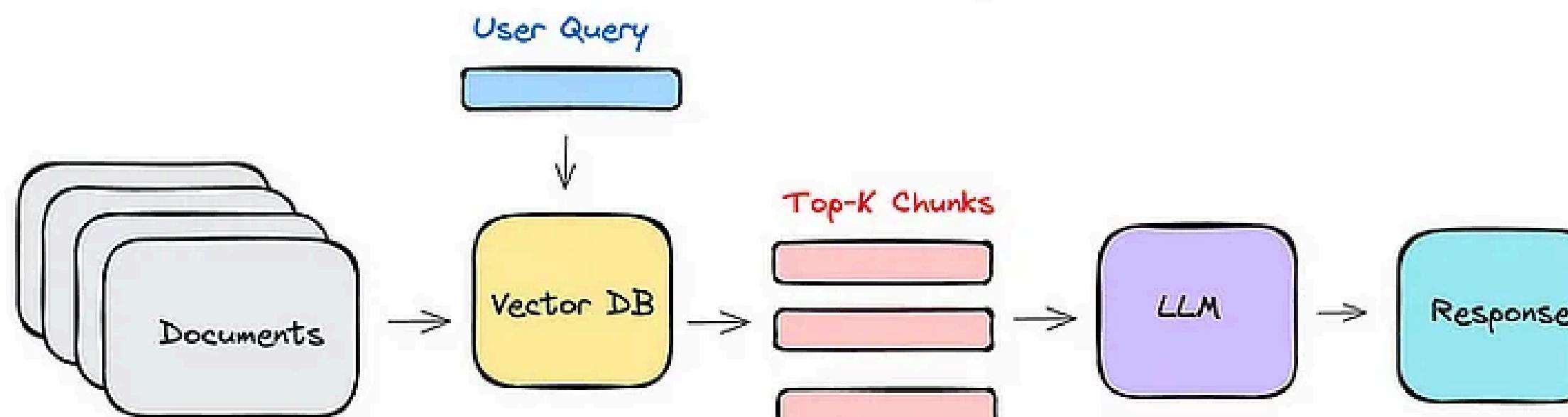
- Patients looking for medicine details.
- Caregivers seeking treatment insights.
- Medical professionals needing quick references.
- Researchers studying drug interactions or properties.



PROJECT OVERVIEW (HOW IT WORKS)

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Basic RAG Pipeline



Step 1: Data Indexing

Step 2: Data Retrieval & Generation

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1- APPLICATION OUTPUT

Deploy :

AI Medical Assistant

Ask medical-related questions, and I will provide relevant responses.

hi

Hi there! How can I help you today?

which is associated with the reduce risk of pulmonary fibrosis from paraquat

Based on the provided context, exposure to environments with 10-12% oxygen has been advocated to reduce the risk of pulmonary fibrosis from paraquat. However, it is important to note the relative contraindications to hyperbaric oxygen therapy, which include a history of recent middle ear or thoracic surgery, untreated pneumothorax, seizure disorder, and severe sinusitis. Prolonged high concentrations of oxygen are associated with pulmonary alveolar tissue damage. In general, the fraction of inspired oxygen (FIO₂) should not be maintained at greater than 60% for more than 24 hours.

What is your question? >

...

2- EMBEDDINGS

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3- CHUNKS

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}
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4- DEMO OF NO ANSWER ON OUT OF CONTEXT QUESTION

AI Medical Assistant

Ask medical-related questions, and I will provide relevant responses.



who is emma watson



This information is Unavailable.



tell me medical use case of oxygen



Oxygen is a vital element for human survival, and its medical uses are diverse. Oxygen therapy is employed in various clinical settings to treat a range of conditions that affect gas exchange and oxygen consumption, such as:

What is your question? >

USE CASE SCENARIO

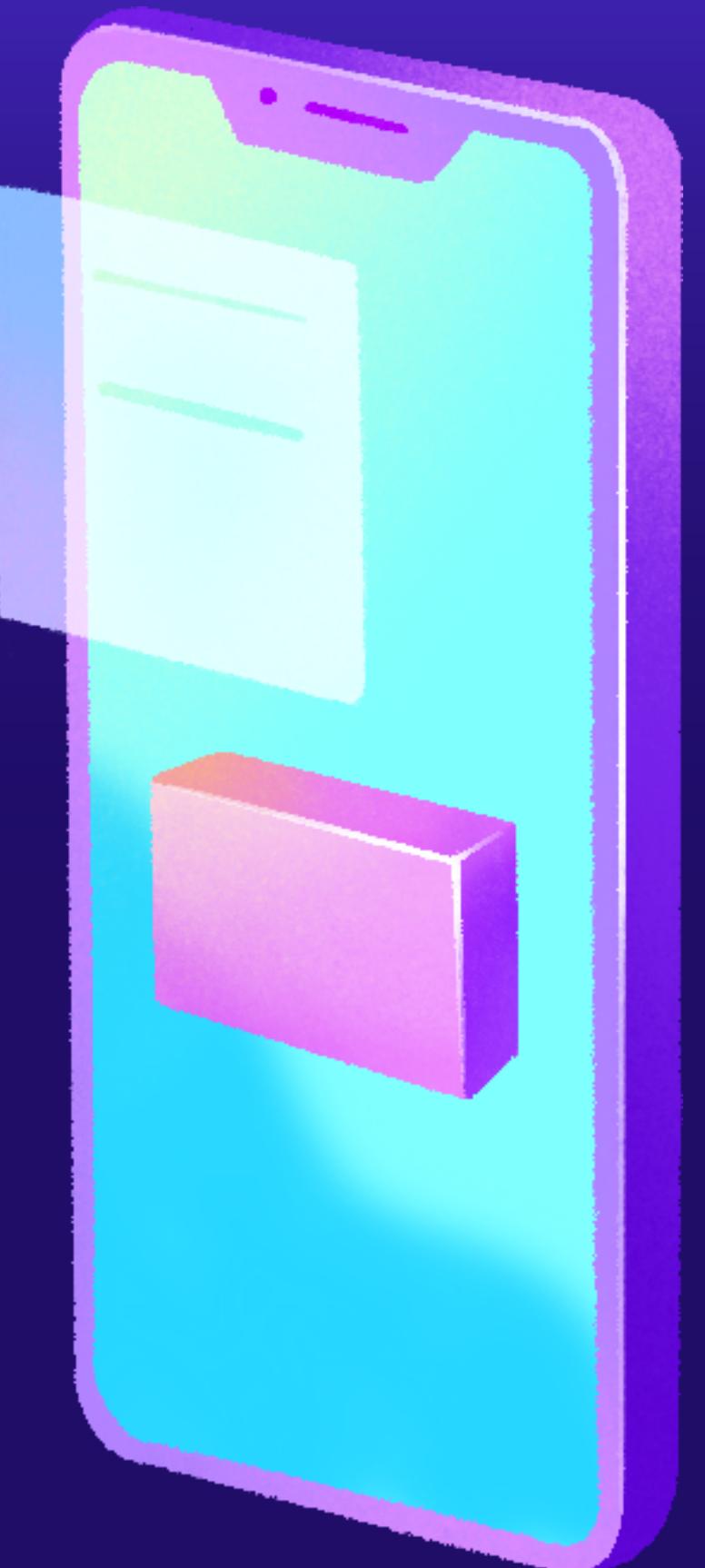
Emma is prescribed a new medication but wants to know its risks and if there's a non-invasive alternative.

The Interaction:

Emma types: "What is Drug Y used for, and what are its risks? Is there a safer alternative?"

AI System Response:

The tool displays Drug Y's uses, its potential side effects, and suggests alternative drugs from the PubChem dataset using FAISS Algorithm.



REVENUE MODEL

Subscription Model: Offer tiered subscription plans for healthcare professionals and institutions, providing a vast amount of drug information using AI inference and intuitive AI.

Advertising: The domain-specific solution would enable collaboration with pharmaceutical companies for targeted advertising within the platform.

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Market Opportunity

- **THE GLOBAL HEALTH INTELLIGENT VIRTUAL ASSISTANT MARKET WAS VALUED AT APPROXIMATELY USD 320.7 MILLION IN 2022 AND IS PROJECTED TO GROW AT A COMPOUND ANNUAL GROWTH RATE (CAGR) OF 24.7% FROM 2023 TO 2030.**
- **FOCUSING ON AI-POWERED MEDICAL QUERY ASSISTANTS, THE MARKET IS EXPECTED TO EXPAND SIGNIFICANTLY, DRIVEN BY THE INCREASING ADOPTION OF AI IN HEALTHCARE APPLICATIONS AND A GROWING EMPHASIS ON PATIENT ENGAGEMENT ACTIVITIES**



REFERENCES

- 1) https://www.grandviewresearch.com/industry-analysis/health-intelligent-virtual-assistant-market?utm_
- 2) https://www.bitcot.com/healthcare-chatbots-and-ai-assistants/?utm_source=chatgpt.com
- 3) https://www.precedenceresearch.com/health-intelligent-virtual-assistant-market?utm_source=chatgpt.com
- 4) <https://pubchem.ncbi.nlm.nih.gov/>

DEMO VIDEO

