

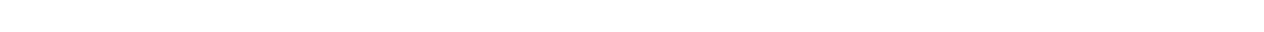
PRODUCTATHON AI

TEAM CRYPTONITE

MIRAGEYE AI-Driven Respiratory Health Management System

Introduction

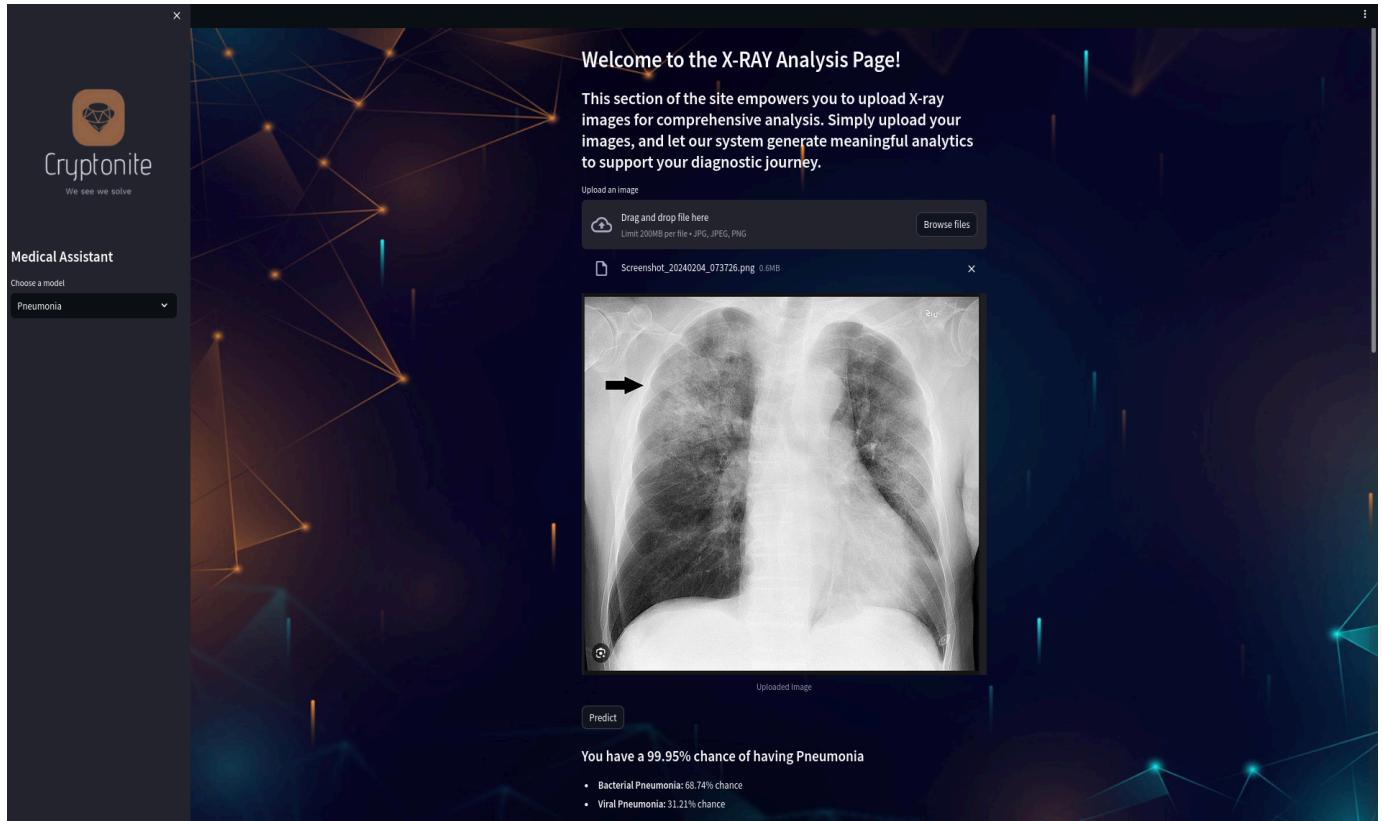
- Analyze chest X-ray images to identify characteristic patterns associated with pneumonia and tuberculosis , enabling rapid diagnosis
- Analyze symptoms to identify early signs of Lung cancer , enabling proactive management
- An interactive chatbot to help the users with any questions
- A Visual tool that uses a severity and scale index to show how serious the illness is along with the areas of high concern
- This innovation can significantly reduce diagnostic delays, enhance treatment outcomes, and decrease the burden on healthcare systems



LET'S TAKE A LOOK AT THE FEATURES AT WORK

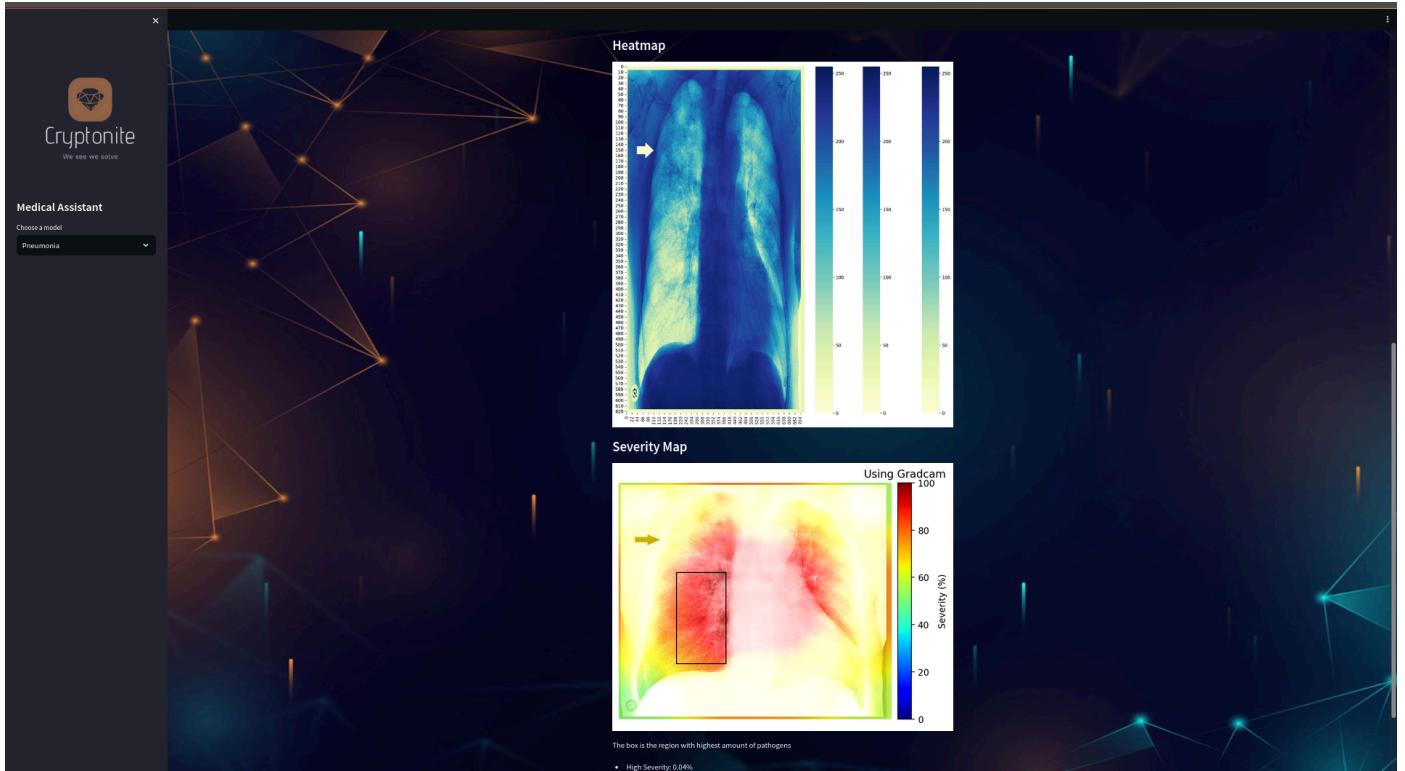
1. PNEUMONIA DETECTION

A. Preliminary analysis



Gives a prediction of pneumonia based on uploaded X-ray image, also performs classification for better understanding of causation.

B. Image guided examinations for pneumonia



Displays a heatmap, followed by gradCAM, both helpful for feature extraction, and understanding the area of problem.

2. Lung Cancer

The screenshot shows a survey interface for lung cancer prediction. At the top left is the Cryptonite logo with the tagline "We see we solve". Below it, the title "Medical Assistant" and "Choose a model" are displayed, with "Lung Cancer" selected. The background features a dark blue gradient with glowing orange and teal network nodes and lines.

Enter your age: 19

How exposed are you to air pollution? (Rate from 1 to 10) 10

Do you consume alcohol regularly? (Rate from 1 to 10) 1

How allergic are you to dust? (Rate from 1 to 10) 1

Are you exposed to any occupational hazards? (Rate from 1 to 10) 5

Do you have a family history of lung cancer? (Rate from 1 to 10) 10

Have you been diagnosed with a chronic lung disease? (Rate from 1 to 10) 1

How balanced is your diet? (Rate from 1 to 10) 8

Are you overweight or obese? (Rate from 1 to 10) 10

Do you smoke? (Rate from 1 to 10) 10

Are you exposed to secondhand smoke? (Rate from 1 to 10) 10

Do you experience chest pain? (Rate from 1 to 10) 10

Have you ever coughed up blood? (Rate from 1 to 10) 10

How often do you feel fatigued? (Rate from 1 to 10) 10

Have you experienced unexplained weight loss? (Rate from 1 to 10) 10

Do you experience shortness of breath? (Rate from 1 to 10) 10

Do you wheeze when breathing? (Rate from 1 to 10) 10

Do you have difficulty swallowing? (Rate from 1 to 10) 10

Have you noticed clubbing of your finger nails? (Rate from 1 to 10) 10

How often do you catch a cold? (Rate from 1 to 10) 10

Do you experience a persistent dry cough? (Rate from 1 to 10) 5

Do you snore regularly? (Rate from 1 to 10) 10

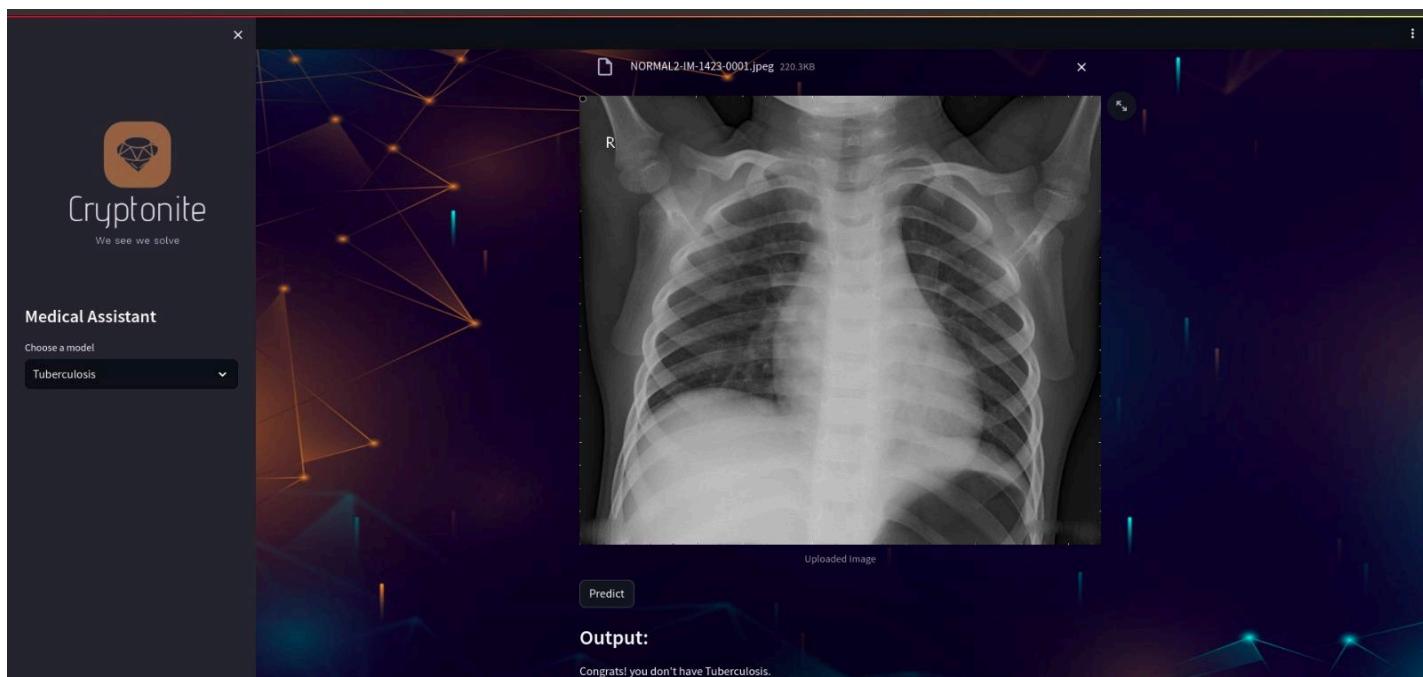
Submit

DIAGNOSIS

You don't have Lung Cancer. Regular screening and a healthy lifestyle remain important for overall well-being. Consult with a healthcare provider for personalized guidance.

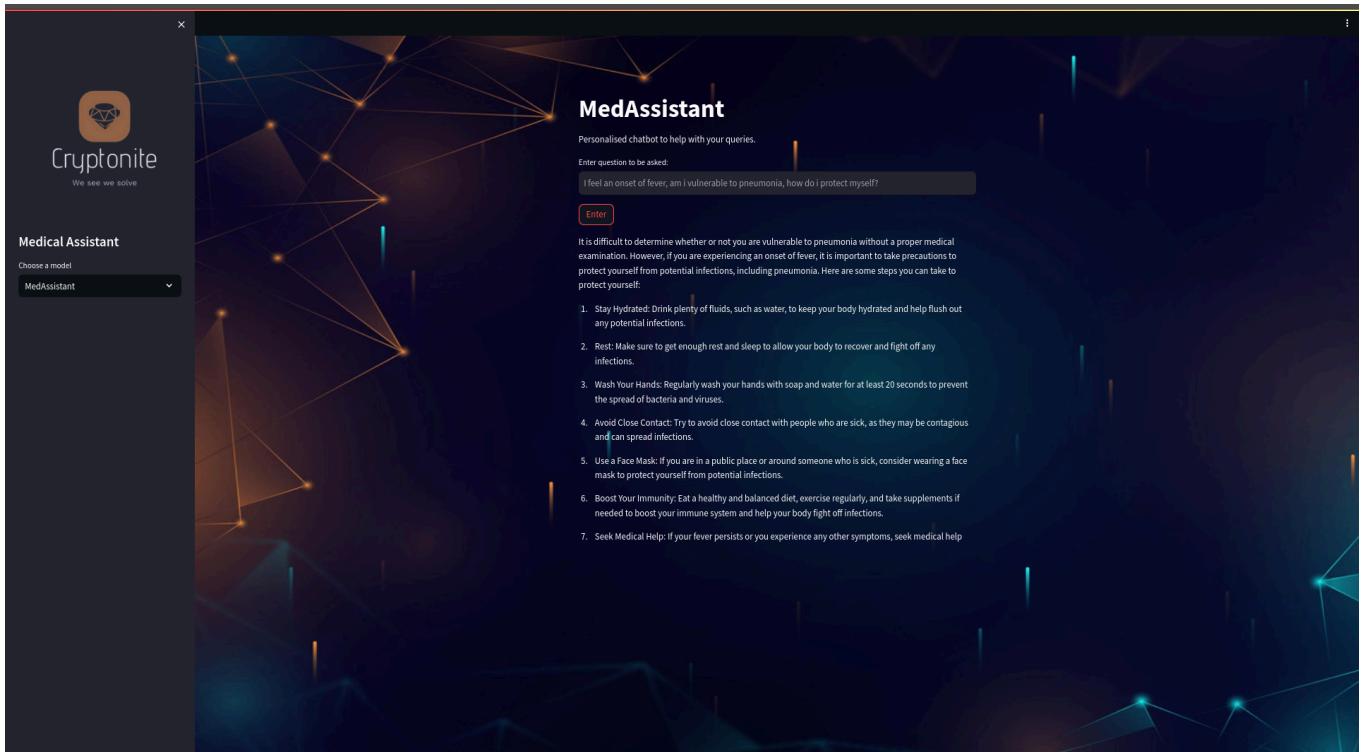
Survey-based prediction for lung cancer.

3. Tuberculosis



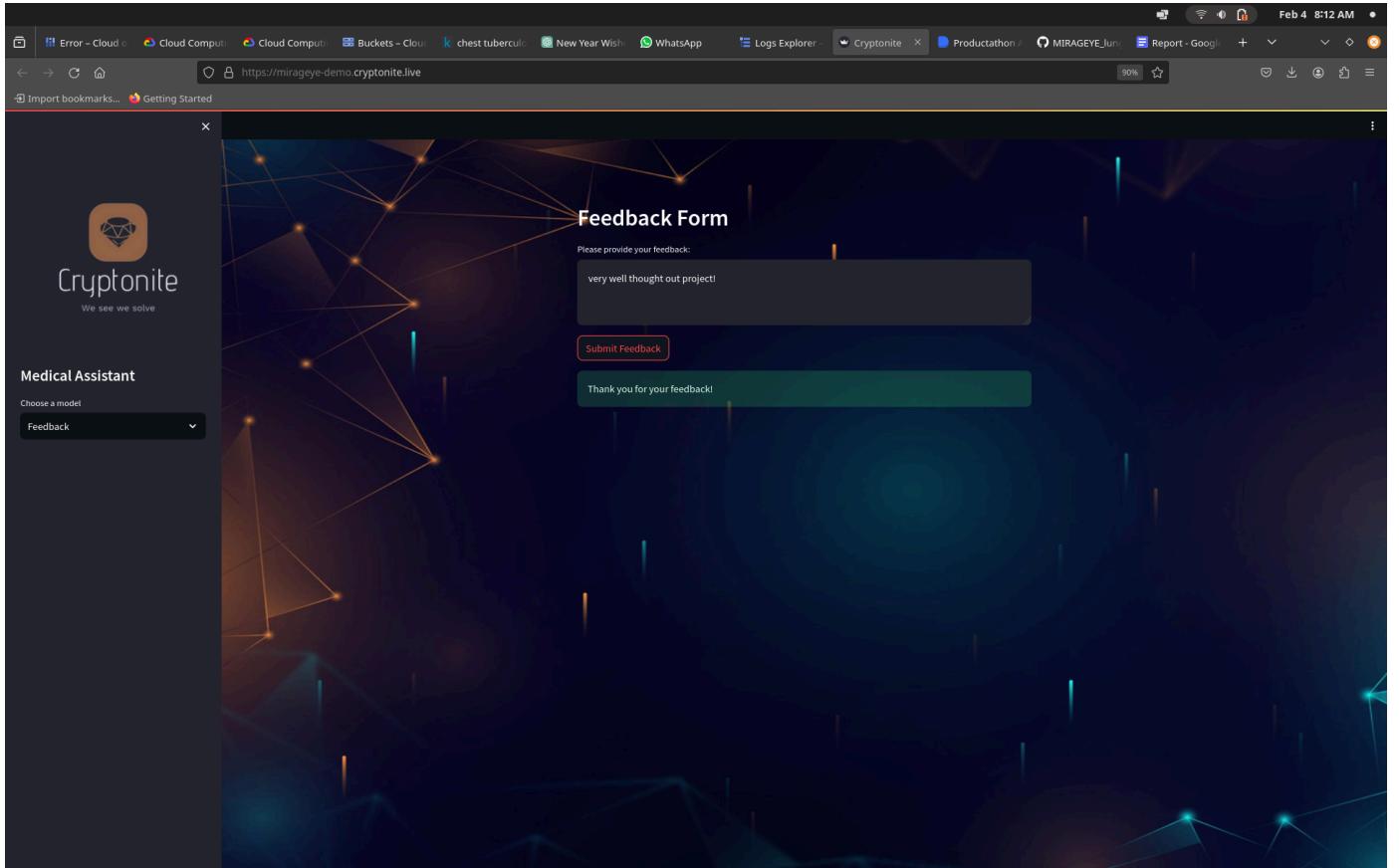
Tuberculosis prediction model, gives brief and helpful output.

4. MedAssistant



An interactive chatbot to ask questions.

5. Feedback



A way to get feedback for constant improvement.