

1. Medical Imaging Analysis

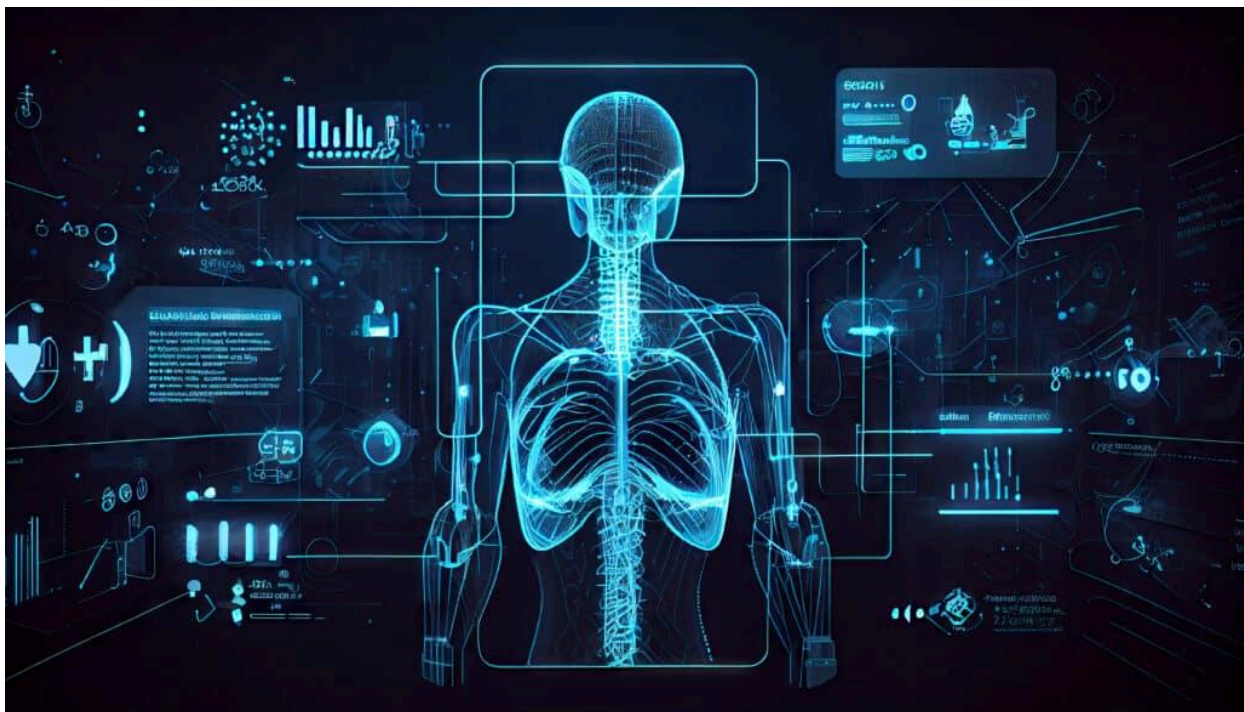
- Detects anomalies in X-rays, MRIs, and CT scans with high accuracy.
- Assist radiologists by highlighting potential issues like tumours, fractures, or infections.

2. Diagnostic Assistance

- Provide real-time diagnostic suggestions based on symptoms and patient history.
- Analyse lab reports and correlate them with potential diagnoses.

3. Patient Monitoring

- Use IoT-enabled devices for continuous monitoring of vital signs (e.g., heart rate, oxygen levels).
- Alert healthcare providers in case of critical changes in a patient's condition.



4. Personalized Treatment Plans

- Analyse genetic and health data to suggest personalised treatments or medications.
- Predict how a patient might respond to certain treatments.

5. Telemedicine Integration

- Facilitate remote consultations by analysing patient symptoms and providing recommendations.
- Enhance doctor-patient interactions with real-time data insights.

6. Surgical Assistance

- Guide surgeons during operations by providing detailed 3D models and critical information.
- Use robotic assistance for precision tasks



7. **Drug Discovery and Development**

- Accelerate the process of identifying potential drug candidates.
- Simulate drug interactions to predict effectiveness and side effects.

8. **Health Record Management**

- Organise and analyse patient data for better recordkeeping and insights.
- Ensure data privacy and security using advanced encryption techniques.

9. **Mental Health Support**

- Use NLP for therapy bots that provide mental health support and guidance.
- Analyse speech patterns to detect early signs of conditions like depression or anxiety.

10. **Public Health Analysis**

- Predict disease outbreaks using AI-powered epidemiology models.
- Assist governments and organisations in planning resource allocation during pandemics.

