Problem statement

In today's fast-paced world, diagnostic errors are the stealthy culprits we can no longer afford to overlook. Diagnostic errors are one of the most important safety problems in health care today, and inflicts the most harm.(According to research)
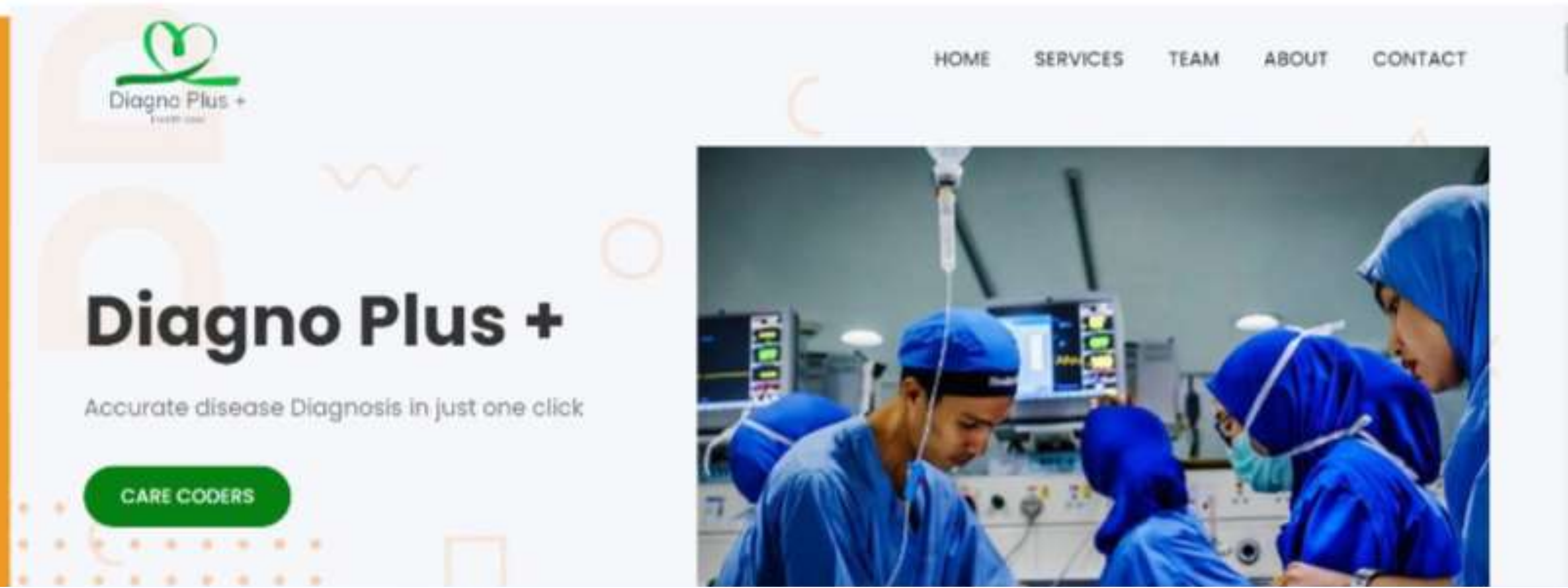
According to WHO, medical mistakes cause 2.6 million deaths annually. More than 138 million patients are harmed every year by doctors' errors

Our Approach

Our solution to this critical problem is to create a dedicated portal to detect and diagnose the onset of different infectious and major diseases in humans through different inputs. We utilized a deep learning model to collect image and CSV data of diseases using different repositories.

Link to Website - **https://diagno.iaeindia.co.in/**

Technology used

- CONVOLUTIONAL NEURAL NETWORKING IN DEEP LEARNING

- XG BOOST FOR PARALLEL TREE BOOSTING

- LOGISTIC REGRESSION FOR PREDICTIVE ANALYSIS

- RANDOM FOREST CLASSIFIER

LANGUAGE USED:-

- PYTHON
- HTML, CSS, JAVA SCRIPT

MAJOR LIBRARIES:-

- KERAS
- TENSOR FLOW
- CV2

Our Competitors:

qure.ai – AI based approach for chest X-rays

- Works only for chest X-rays
- Requires pre scheduling for diagnosis

Our USP:

1. Dedicated Portal with easy interface
2. Fast and high accuracy.
3. Inexpensive and Reliable diagnosis.
4. Instant report generation
5. Localization
6. Medical Repository

Social Impact

- *Cost effective*
- Rapid treatment
- *Lightens the load on healthcare Infrastructure*
- Collection of data

Environmental Impact 🌐

LABOUR RESOURCE CONSERVATION

Need for fewer tests for the detection of diseases and helping doctors to diagnose the patient easily lessening the workload

COMPUTERISED DATA

All the scanned data is stored digitally which is easier to transfer and generation of physical copy is not needed

ECO-FRIENDLY

Helps in reducing carbon footprint by keeping all the data in digital format and removing the need for a physical copy of the x-rays and other medical wastes

Market & Opportunity

India diagnostic labs market stood at USD 14.7 billion in 2022. The Indian diagnostics space is a growing sector with an annual CAGR of 11-12 per cent.

4.3 billion USD	**2.43 billion USD**	**6.8 million USD**
Total Addressable Market	Serviceable Obtainable Market	Serviceable Addressable Market

The Technology/Innovation

State the Technology Readiness Level (TRL):
 TRL 4 - TRL 5

Road Map:
1) Copyrighting of the codes and other documentation .
2) Code development to attain high accuracy rate.
3) Testing of the in relevant environment.
4) Necessary approvals from MCI.
5) Launch of the service.

Business Model

Business model: **Pay-per-Use Model -** On-demand access for healthcare providers with sporadic needs, promoting flexibility.

Our startup targets a substantial share of the diagnostic market.

Targeted customer : Doctors and Diagnostic labs

Expenditure

High (%) Cost of New Hires

14% of manager's time is spent on hiring activities

Hiring & training a new employee can cost b/w 30% & 50% of their salary

90%

90% of employees remain with orgnazation for about 6 months

Typical cost of turnover for employees was 21% of that employee's annual salary

- Cost of machine learning algorithm = Rs.40L
- Web developnment= 50k
- Marketing(search engine optimization)= Rs.10L
- Total model costs = Rs 50 lakhs

Three year Financial Model!!

1ST YEAR REVENUE PROJECTIONS:

15000x 12 x 250 (cost per diagnosis)= 4.5 Cr

Year 1 sales(conservative estimate)= 4.5 Cr

Gross margin = 4 Cr

2ND YEAR REVENUE PROJECTIONS:

25000 x 12 x 250 (cost per diagnosis)= 7.5 Cr

Year 2 sales =7.5 Cr
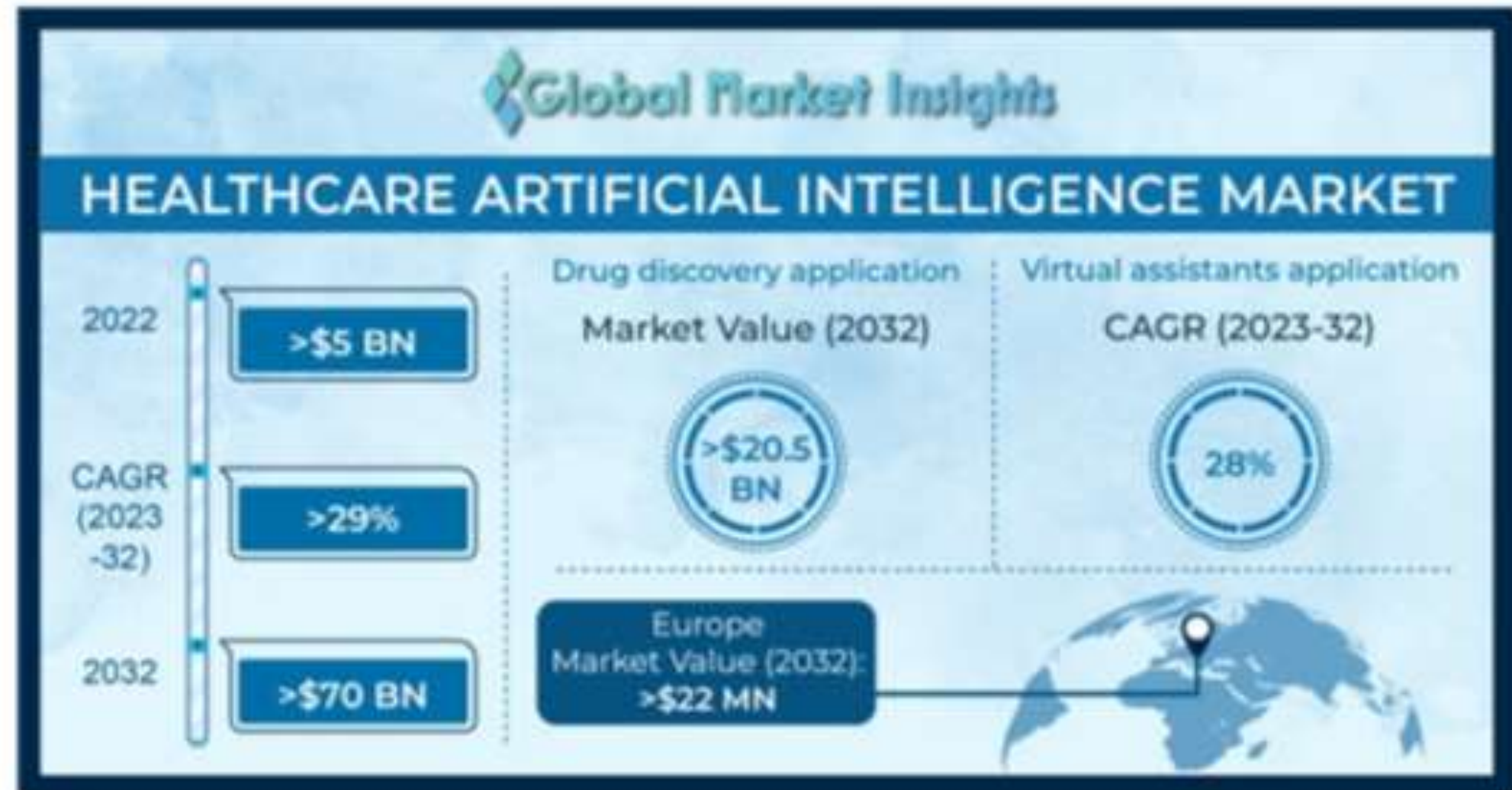
Gross margin = 7 Cr

3RD YEAR REVENUE PROJECTIONS:

35000 x 12 x 250 (cost per diagnosis)= 10.5 Cr

Year 3 sales = 10.5 Cr

Gross margin = 10 Cr

FUTURE WORKS

- To add predictive models for more diseases
- To increase the accuracy rate of existing predictive models
- Suggestions for good hospitals according to user's location
- Consultation with best doctors according to disease diagnosed

Recognitions!! 🏅

Our idea got recognition at various national and international events:

- BEST PITCH award in the first ever IDE (Innovation, Design and Entrepreneurship) Boot camp, conducted by MoI and AICTE at pan India level in Chandigarh.
- Secured 2nd place at international level hackathon (Technothon 2022), conducted by Galgotias college, Greater Noida.
- Selected for Wadhwani Nen NextGen 2.0 Program.
- Bihar Innovation Challenge 2023 Finalist, conducted by Bihar Startup.

Care Coders

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Link to Video Pitch - **https://youtu.be/WB4ZIl3tVfg?feature=shared**

Thank you! ♬