SLIDE 01

Good afternoon sir,

We are team NOVA from MGM University, Ch. Sambhajinagar. For this event, we will be developing an AI powered health insurance assistant; named InsureSmart. ; based on PS 07

SLIDE 02  
  
It will be a web-based platform having three major functionalities;

1. The 1st one is Evaluating the User's Health Status:
   1. This will be done by extracting pre-existing disease’s name, if any, from a diagnosis report uploaded by user.
   2. Also, underlying health condition will be identified by analyzing user’s medical test results. The test result values can be entered manually or by uploading a report. We will implement ML model trained on dataset from Kaggle. Dataset has values for 9 medical tests as its attributes and 5 labels/classes of health condition in target attribute. Link below
2. thereafter, the user will be given a questionnaire regarding his/her lifestyle choices. For eg. Smoking, drinking, exercise frequency, mental stress, occupational hazard. These answers will be taken as String (never, sometimes, frequently) stored in the form of ordinal categorical values. This will be used for calculating health score using weighted average method. The score would range from 0 (Worst) to 5(Best), The weightage for every factor would be specified by each registered insurer and the platform would take average of their inputs.
3. Next, insurers can load their plan on our platform by specifying its features like(disease it covers, health score required, monthly premium amount, addons etc.)

Thereon, Insurance plans will be recommended based upon the user’s health and lifestyle along with any addons required by him. The plans would be ranked based on degree to which they suit the user.

Also user’s will be advised regarding how of sum assured value should they apply for wrt their annual income and already existing policies’ value. This will reduce the possibilities of user’s policy application getting rejected.

Thereafter, user can contact the insurer or make direct purchases.

SLIDE 03.

Coming to the technologies that we would be implementing on our platform;

The frontend will be built using Next JS, backend connections would be handled via API routes. Express API files will handle database operations while Python API files will be used for ML model inference. data storage would be managed by MySQL.

Text from uploaded files will be extracted using Tesseract. It is an open-source engine developed by Google. It will be complemented by PIL and pdf2image Python libraries for reading image and PDF files respectively.

The ML model to be used to identify user’s health condition can be based on either RF Algo or MLP Algo. These 2 are best suited because the dataset is structured and its attribtutes have a non linear relationship between them.

We would be implementing MLP algo on our platform. This is because, though it requires more computational power, the dataset is comparatively smaller. Also the MLP architecture can be defined as per my requirements; like setting the number of hidden layers, no. of nodes in them , which activation function to be used, no. of epochs or iterations for training After training the model, it will be deployed as a pickle file (.pkl).

If time permits, we would integrate Razorpay API as payment gateway. Additionally, Google Maps API can be used for displaying insurer’s address.

To explain the flowchart process ??????

SLIDE 04

In future, our platform can be enhanced with additional features like:-

advanced AI insights(example – estimating Probability of claim Approval, cost-to-benefit analysis).

It may have multiple revenue streams (example - partnerships with insurance companies, API-based licensing for business-to-business collaborations (Hospitals, fintech), premium surcharges for additional insights like the ones I mentioned before.

As and when our system is optimized using huge volume of data. It will reduce the efforts required by user’s side to searching and give best suited plans

CHALLENGES – by self as better explanation in ppt.

Slide 05: -

InsureSmart would stand out from existing platforms due to its

**data-driven approach** providing accurate insights.

Users wont have to struggle comparing multiple policies, as the system would analyze their requirement and suggests the most suitable plans.  
  
InsureSmart, would serve as a medium for insurers around the world to expand their business.

Unlike contemporary methods, the users wont be much dependent on agents and the insurance selection process would be faster and less-biased.

Slide 07.

For the development of InsureSmart, we would be referring to the following sources……….

**Additionally prepare for -**   
what is Random forest , MLP , Tesseract ,

MLP – Activation Function = mathematical function applied to the output of a neuron. ;

Max\_iter = 200; this means number of iterations/epochs to be done for training model. Each iteration has a forword propagation of data, and backward propagation for error correction. 🔹 If the model converges before 200 iterations, training stops early.  
🔹 If 200 iterations are reached and the model hasn’t converged, training stops forcefully.

Tesseract - software tool, who code is available to public, anyone can see, modify etc…

non linear relationship – though the test like Hbaic and Blood glucose are related, don’t have a simple linear relationship.

They are not simply proportional. Threshold-based health conditions ;