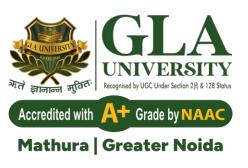


# INTERNAL DEVIATHON 2025 TITLE PAGE



- Problem Statement ID DEV0007
- Problem Statement Title –AI PERSONALIZED MEDICINE
- Theme –CYBER SECURITY
- PS Category Software
- Team ID DV21
- Team Name LOGIC LEADERS



## AI PERSONALIZED MEDICINE



Al personalized medicine = "The right treatment, for the right patient, at the right time."

#### **ADDRESSES OF THE PROBLEM:**

**Data Overload :** All analyses huge patient datasets to find hidden patterns fast.

**Early Diagnosis:** All detects early disease signs from genetics, scans, and wearables for timely treatment.

**Drug Response**: Al predicts how patients respond to drugs based on genetic info to personalize prescriptions.

**Clinical Decision Support:** Al recommends tailored treatment plans by learning from similar cases.

**Drug Development :** Al accelerates drug discovery by predicting effective molecules for specific patients.

**Remote Monitoring:** Al + wearables track patient health in real-time, alerting for personalized care.

#### **INNOVATION AND UNIQUENESS:**

- •Combines different data like genes, health history, and wearables.
- •Updates treatment plans as patient data changes.
- •Makes faster and more accurate decisions than traditional methods.



# TECHNICAL APPROACH





### Methodology flowchart of AI personalized medicine

Data Collection

EHRS, Genes Imaging, Wearables.

Data Processing

Cleaning, Integration, Normalization AI Modelling

ML,DL for prediction & Clustering

Validation

Testing, Bias Check, Explainability Clinical Uses

Doctor's
Support,
Patient Care
Plans

Continuous Learning

Feedback, Retraining, Outcomes.

**PROGRAMMING LANGUAGES IS USED: Python** 



## FEASIBILITY AND VIABILITY



#### **Feasibility Analysis**

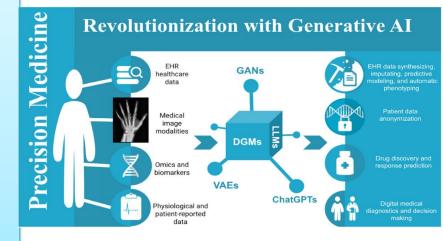
- Al boosts healthcare access and affordability in rural/underserved areas.
- ——> Proven success in cancer treatment, drug response, and diagnostics.

#### **Challenges & Risks**

- Patients may distrust AI due to lack of transparency.
- → AI decisions often feel like a "black box," causing fear of uncertainty.

#### **Strategies to Overcome**

- Combine AI with doctor involvement for better trust.



Source: ChatGPT



# IMPACT AND BENEFITS



- Potential impact on target guidance.
- Patients gets faster and better guidance by saving time.
- → Benefits of the solution.
- → According to our medical data AI can predict the disease in advance.



## RESEARCH AND REFERENCES



Book: NIH: Artificial Intelligence in healthcare

transforming of medicine

Author: Junaid Bajwa, Usman Munir

Source: ChatGPT