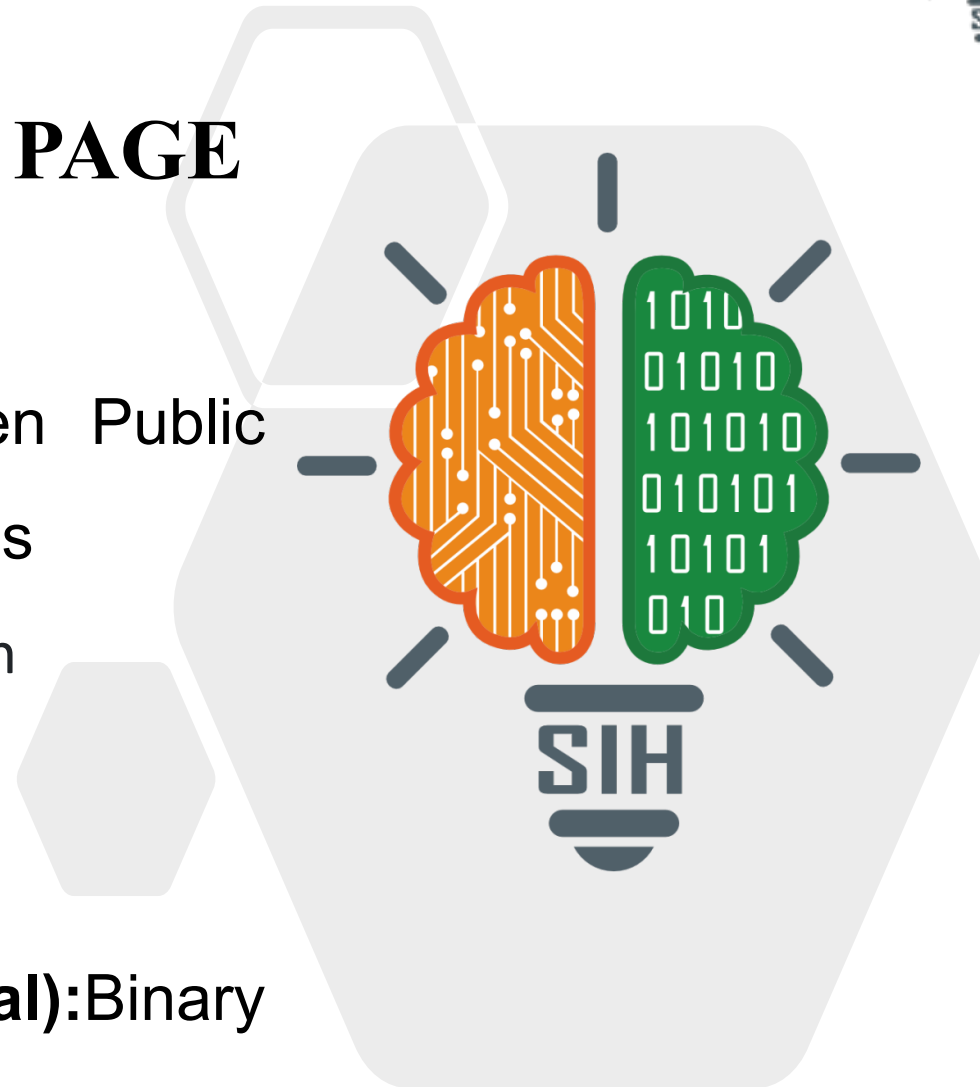SMART INDIA HACKATHON 2025

TITLE PAGE

- **Problem Statement ID –** SIH25049

- **Problem Statement Title-** AI-Driven Public Health Chatbot for Disease Awareness

- **Theme-** MedTech / BioTech / HealthTech

- **PS Category-** Software

- **Team ID-**

- **Team Name (Registered on portal):**Binary Brains

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AI-Driven Public Health Chatbot for Disease Awareness

- A multilingual AI chatbot on Telegram, built with NLP to deliver preventive healthcare information and real-time outbreak alerts to rural communities.

- We propose to develop a multilingual (English and Hindi) AI-powered health chatbot accessible via Telegram that educates rural and semi-urban populations on preventive healthcare, disease symptoms .

- Python-based backend handles message routing, user management, and integration with Telegram BotFather .

- Uses Gemini API for natural language understanding and generation, enabling support for multiple regional languages and accurate, conversational responses.

TECHNICAL APPROACH

- **Technologies to be used:**
  Python – backend logic & API integration

  Gemini API – multilingual AI/NLP

  Telegram BotFather – communication channel

  HTTPS & API keys – secure data exchange

- **Methodology:**
  Connect WhatsApp/SMS API to Python backend

  Use Gemini API to process queries & generate multilingual replies

  Send accurate responses & outbreak alerts to users

FEASIBILITY AND VIABILITY

Analysis of Feasibility

- High feasibility as Python + Gemini API are lightweight and easy to deploy
- Telegram ensures accessibility even in low-internet areas

Potential Challenges & Risks

- Limited internet or smartphone penetration in some regions
- Ensuring data privacy & security
- Multilingual accuracy for regional dialects

Strategies to Overcome

- Enable SMS fallback for no-internet users
- Use strong encryption & secure APIs
- Continuous model fine-tuning and user feedback for language accuracy

IMPACT AND BENEFITS

Potential Impact on Target Audience

•Improves health awareness and preventive care in rural & semi-urban areas

•Provides quick, reliable answers in local languages via Telegram

•Encourages timely vaccination and reduces misinformation

Benefits of the Solution

•**Social:** Better public health, reduced disease spread

•**Economic:** Lower healthcare costs by preventing outbreaks

•**Environmental:** Less paper-based communication, eco-friendly digital approach

Binary Brains

References & Research Work

- Ministry of Health & Family Welfare – https://www.mohfw.gov.in
- WHO – Preventive Healthcare & Vaccination Schedules – https://www.who.int
- National Health Portal – https://www.nhp.gov.in
- Telegram BotFather API – https://telegram.me/BotFather
- Google Gemini API – https://ai.google.dev/gemini-api

IMPORTANT INSTRUCTIONS

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Please ensure below pointers are met while submitting the Idea PPT:

1. Kindly keep the maximum slides limit up to six **(6).** (Including the title slide)

2. Try to avoid paragraphs and post your idea in points /diagrams / Infographics /pictures

3. Keep your explanation precise and easy to understand

4. Idea should be unique and novel.

5. You can only use provided template for making the PPT without changing the idea details pointers (mentioned in previous slides).

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