

Indian Language Toolkits

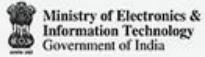
Breaking Language Barriers – Empowering Communication in Various Sectors through Multilingual AI

Oct-2025



About Bhashini

 3 Billion+
Total Inference



 450 +
Total Active
Customers

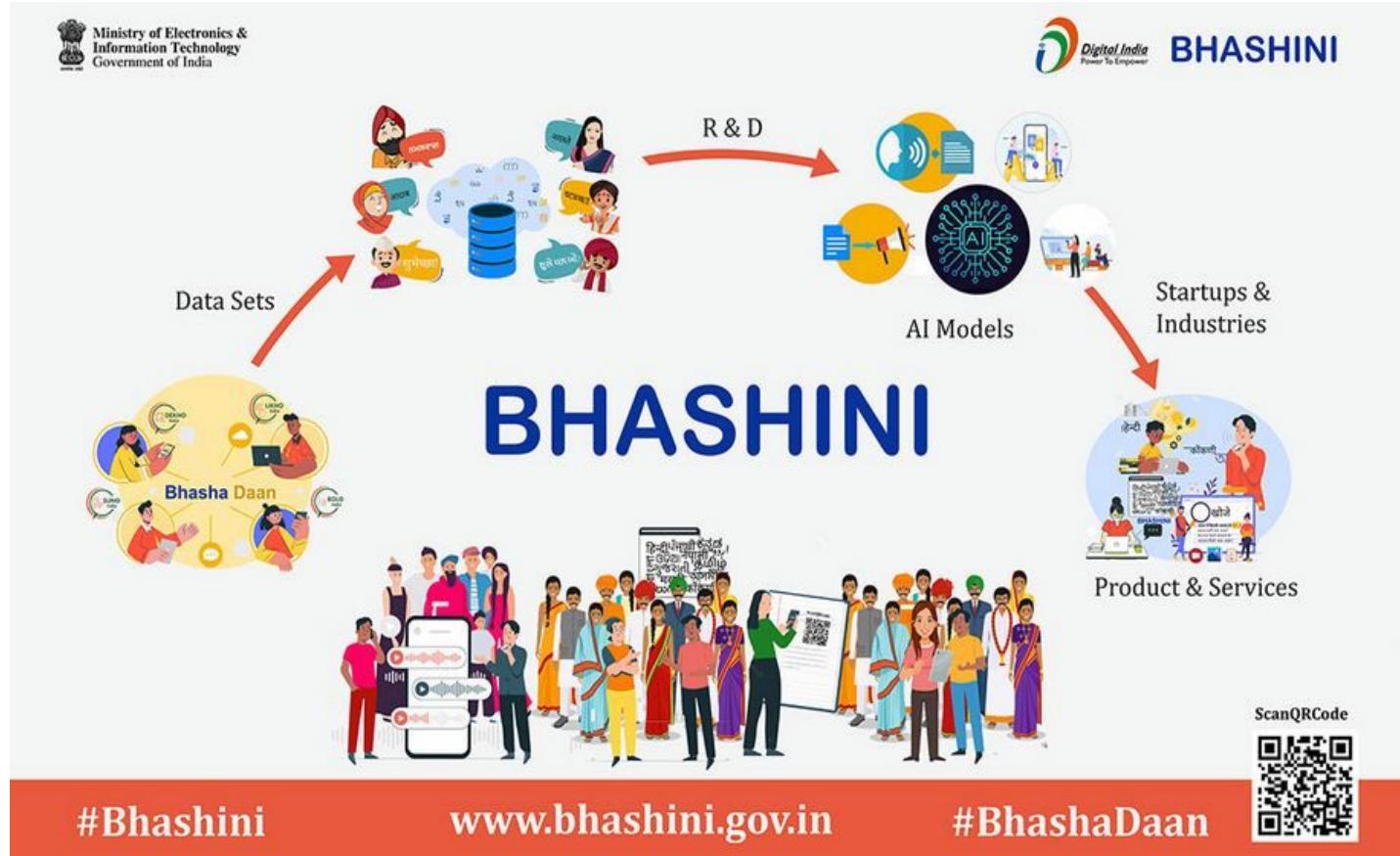
Data Sets

 100 +
Total Usecases

 20 +
Languages
Supported

 20 +
Language
Services

 350 +
Total AI Models



Bhashini Use Case Demo

The screenshot shows a web browser window for the 'Configurable Chatbot' demo at canvas.iit.ac.in/configurablechatbotfestage/. The page features a header with the 'Configurable Chatbot' logo and navigation links for Features, Use Cases, How It Works, Demo, Contact, and Dashboard. Below the header, there's a section titled 'AI Chatbot for 22+ Indian Languages' with a subtext about creating intelligent chatbots for government services, educational institutions, and citizen engagement. It includes 'Create Your Chatbot' and 'View Live Demo' buttons. On the right, a 'Live Chatbot Demo' window is open, showing a user message 'How do I view my land record?' and a bot response: 'You need your survey number and village name. I can guide you step by step.' A 'Show Detail' button is visible in the response box. At the bottom of the demo window, there's a text input field with placeholder 'Type in any Indian language...' and a small icon.



Megathon Challenge : Innovative solutions Leveraging Bhashini Models

- Build an innovative application which leverages Bhashini models (ASR, MT, TTS, OCR)
- Enable seamless cross-language communication for the domains of interest.
- A Complete deployable *mobile / mobile-responsive web application should be built (Full stack application leveraging Bhashini models)*
- Deliverables : (i) source code (ii) demo video (iii) usage and installation documentation (iv) clear dependency specifications

Deployability, Usability, Seamless working of modules and optimal resource utilization



Domains and Scenarios Of Interest

- Domains – Pick anyone
 - ❖ Tourism
 - ❖ Healthcare
 - ❖ Workplace-Bank
 - ❖ Agriculture
- Scenarios – Address at least 4 scenarios
 - ❖ Scenarios provided are indicative.
 - ❖ You are free to imagine any relevant scenarios



Tourism : Enhance Travel Experience of a tourist(s) in alien land



TOURIST TOOLKIT
Enhance Your Indian Journey. Communicate Without Barriers.

MUSEUM / HISTORIC SITES

DRIVERS & VENDORS

FOOD MENUS & SIGNS

LOCAL BLOGS & EXPERIENCES

Trance Assist
SPEAK. READ. EXPLORE.

The arrow on the sign is pointing towards the right, indicating the direction of the monorail.

Evolve travel to assist tourists to take the lead for tomorr' the hind tomorrow!



Healthcare : Make The Experience Seamless at a hospital



Agriculture: Empower farmers and Agri professionals to access and disseminate information

AGRICULTURIST TOOLKIT
Empower Indian Farmers. Cultivate & Communicate Seamlessly

The toolkit features four main sections:

- ADVISORY NOTES & PEST DIAGNOSIS:** Illustrates a woman in a sari examining a plant leaf through a magnifying glass, with various insect icons below.
- FARMER TRAININGS:** Illustrates a group of farmers sitting cross-legged, receiving training from a man standing at a computer screen displaying agricultural data.
- MATERIAL PROCUREMENT:** Illustrates a man using a tablet to check prices or quality of agricultural inputs like bags of fertilizer.
- MARKET PRICES & SALES:** Illustrates farmers using tablets and smartphones to check market prices and communicate via video call.

**(Microphone icon) AGRI-VOICE ASSIST.
SPEAK. READ. EXPLORE.**



Workplace-Bank : Enable Employees, Customers & Vendors work seamlessly

WORKPLACE TOOLKIT

Navigate Your Indian Bank. Communicate & Unify Without Barriers

The collage consists of six panels illustrating different scenarios:

- CUSTOMER QUERIES (ONLINE/OFFLINE)**: A customer in an orange shirt interacts with a bank employee at a counter, with a computer monitor and a smartphone showing interface screens.
- INTEREST RATES - वर्तन दर**: Two people, one holding a smartphone, discuss interest rates, with a laptop and a document showing data.
- EMPLOYEE TRAINING & MEETINGS**: Two employees in blue shirts sit at a table with a monitor displaying a video conference of another employee.
- EMPLOYEE TRAINING & MEETINGS**: Two employees in blue shirts sit at a table with a monitor displaying a presentation slide.
- POLICY/PRODUCT DOCUMENT ACCESS**: A hand holds a smartphone displaying a document titled "INHERITANCE" and "INTEREST RATES".
- SIGNAGE & INTERNAL COMMUNICATION**: Two employees interact with a whiteboard displaying various documents and information.

TRANCE ASSIST
SPEAK. READ. EXPLORE.

Every application should have the below aspects embedded into their solution

1. A real-time speech to speech component
2. A document, image, text, or website being translated to text or speech
3. A scanned document, image or video with text being translated
4. Query , extraction and summarization of content (text, doc , video, audio)
5. Application should be multi modal (cover at least two modalities) : text, video, audio, image
6. Must use the Bhashini languages APIs (ASR, MT, TTS and OCR)
7. Bringing together the selected scenarios into a seamless “usable” application is key. Should not look like bits and pieces joined together.
8. Efficient usage of resources, since language models are heavy and GPU intensive.

Bonus

1. < 10 sec delay for real-time speech to speech
2. A conversation style content translation i.e., for content to speech output
3. Model adaptation (Bhashini models available as open source maybe adapted as per the application requirements)

Judging will be based on how many of these constraints are met.



Key guidelines

- The scenarios provided are indicative to trigger ideation.
- In all scenarios assume there will be a English speaking person apart from people who can speak only local language. And there are people who speak mixed languages
- Data needed for the applications to be built or demoed is the responsibility of the participant (google it)
- Any additional models and APIs for technologies needed for their solution but not available on the Bhashini sandbox may also be leveraged e.g LLMs or pre-post processing models.
- You will not be held responsible for accuracy of the Bhashini models. How you put them to use and meet the scenario requirements is the key.
- GPUs & training datasets will not be provided for model training . You need to manage on your own



Evaluation Rubric

Innovation

Solutioning & Features
Usage of Models

Translational Modalities

Realtime Speech-to-Speech
Multi-modality Handling

Design & Architecture

Resource Utilization
Performance

Application Experience

UI cleanliness
Integrated functionality

Presentation

Documentation
Demonstration

Bonus

Realtime S2S <10sec
Conversational Speech
Model Adaptation



Anuvaadhub – The Bhashini Sandbox



- Playground of Indian Language Translational models
- Bhashini Consortium Models + Open Source : MT, TTS, ASR, OCR
- Provides Benchmarking tools and Leaderboards for models
- APIs to integrate into your applications
- Can play-around with the models using Tryout feature
- SignUp Login Access Models Request API Access Admin Approval Use APIs

<https://anuvaadhub.com/>



View Leaderboard. Try out various models. and pick the ones that suit best to your requirement



Moving Ahead...

1. *You will have continued access to AnuvaadHub*
 1. *You can build your applications using this playground*
 2. *Adapt and benchmark these models*

2. *Engage with Bhashini Consortium to pursue your NLP journey*

