



< All problem statements

AI/ML

Realtime Translation of Voice Calls

Summary

Embark on a journey to break language barriers. Create a real-time voice translation app that connects people across the globe, enabling them to converse in their native languages effortlessly and expanding the horizons of communication.

Requirements

1. Utilize WebRTC or similar technologies for seamless voice communication.
2. Prioritize minimal translation latency to maintain a natural conversation flow.
3. Include support for local dialects and idiomatic expressions.
4. Ensure translation accuracy and context preservation.

Access Free OpenAI API Keys!

Limited OpenAI API keys available at no cost for your hackathon project. Reach out [here](#) with your use case, and get keys for Speech-to-Text, Chat Completions, Embeddings, and more. Keys deleted post-hackathon.

Explore Models

You have the freedom to explore a wide range of models for your project. Not limited to the following options:

- [OpenAI API - Introduction](#)
- [Mistral 7B - Introduction](#)
- [SeamlessM4T - Introduction](#)

Additional Resources

Take your project further with these valuable resources:

- [Youtube - Voice Cloning In Multiple Languages - Open Source](#)
- [Youtube - Master Deep Voice Cloning in Minutes](#)
- [GitHub - 🦉 Text-Prompted Generative Audio Model](#)
- [Notion - 🐶 Suno's Speaker Library](#)
- [CoLab - SeamlessM4T Notebook](#)
- [ElevenLabs - Voice Cloning: Clone Your Voice in Minutes](#)
- [GitHub - 🐸 A deep learning toolkit for Text-to-Speech](#)

Suggested Approach

Day 1 - 2: Planning and Infrastructure Setup

Product Management & AI/ ML Specialists:

- Define project scope, focusing on key languages and dialects.
- Research and select AI models suitable for real-time translation and dialect recognition.

Backend Development:

- Set up server infrastructure and integrate WebRTC or similar technology for voice communication.
- Begin developing the core translation engine.

Frontend Development:

- Design a user-friendly interface for the voice translation app.
- Implement voice capture and playback functionalities.

Day 3 - 4: AI Integration and Feature Development

AI/ ML & Data Science Specialists:

- Integrate AI models for real-time translation.
- Work on minimizing translation latency and enhancing accuracy

Frontend & Backend Development:

- Ensure smooth integration between the frontend interface and the translation backend.
- Develop features for handling different dialects and idiomatic expressions.

Product Design:

- Refine the app design based on user interaction flow and feedback from the team.

Day 5: Testing, Refinement, & Presentation

All Team Members:

- Conduct extensive testing to ensure translation accuracy and low latency.
- Refine the user interface and troubleshoot any technical issues.
- Prepare a presentation demonstrating the app's capabilities, focusing on its potential to bridge language barriers.

Other Problem Statements

AI/ML

Talk to Santa Claus

Bring the magic of Christmas to life by developing an AI where children can converse with Santa Claus. This enchanting project is about creating joyous and safe interactions and making holiday wishes come true through innovative voice technology.

Fintech

Simplifying Small Business Payments

Build an application that enables small businesses to manage their payments efficiently. This app should allow business owners to create profiles for each of their clients, track payment transactions, and receive real-time alerts for unpaid invoices.

AI/ML

Real-Time Air Quality

Design a real-time air quality dashboard that shows the air quality of any region worldwide, empowering users to take action.

AI/ML

Precision Farming for Best Product Results with Data

Build a solution that predicts the best time to plant and harvest crops, taking into account local weather conditions and soil quality. This solution will help farmers improve their yields.

Health

Medication Adherence Improved with Digital Solutions

Develop a digital solution to improve medication adherence for chronic patients. The solution should empower healthcare professionals and patients to manage medication regimens effectively.

EdTech

Intelligent Learning Connections

Build an AI-powered application that uses a collaborative learning matching system designed to enhance collaborative learning experiences by intelligently pairing learners based on their performance metrics.

AI/ML

Instant Customer Support for Business Websites

Imagine revolutionizing customer service with an AI-powered chat

AI/ML

Farmer Supporter

Make a significant impact on the agricultural sector by developing a website that assists farmers in

AI/ML

Enabling Conversations with a Persona for Illiterates

Dive into the world of AI to create a voice chatbot that bridges the digital divide for

agent that intuitively understands and responds to various customer needs, 24/7. This is your chance to shape the future of customer interaction, enhancing business efficiency and client satisfaction.

making informed decisions. This project focuses on leveraging AI to provide expert advice on crop management, market insights, and real-time problem-solving.

illiterates. Your challenge is to craft an intelligent and empathetic digital companion that can converse naturally, offering a seamless and confidential communication experience.

Fintech

Effortless Cross-Border Financial Transfers

Build an application that enables users to initiate cross-border money transfers with ease. The app should offer real-time exchange rate information, low transaction fees, and quick delivery of funds.

AI/ML

Conversing with an E-commerce Store Database

Transform how businesses interact with data by building a system where non-tech savvy users can query an e-commerce database using simple, everyday language. This challenge is all about bridging the gap between

E-

Commerce

Advance Marketing growth with Business data insights

Create an application that allows e-commerce sellers to analyze customer behaviour, track sales performance, and tailor their marketing efforts based on real-time insights. This

complex data
management
and intuitive user
experience.

application
should provide
clear, actionable
data for
marketing
optimization.

Health

AI-Powered Symptom and Diagnosis Guidance

Build an application that allows patients to describe their symptoms and receive preliminary medical advice from an AI-powered chatbot. This app should offer quick responses and help users decide if they need to seek in-person medical care.