

SMART INDIA
HACKATHON
2023

Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation: Ministry of Power

PS Code: SIH1380

Problem Statement Title: Intelligent chatbot to answer queries pertaining to various Maintenance Processes within Substation

Team Name: SARASS

Team Leader Name: Rahul Patel

Institute Code (AISHE):

Institute Name: Hansraj College, Delhi University

Theme Name: Navi Chatbot

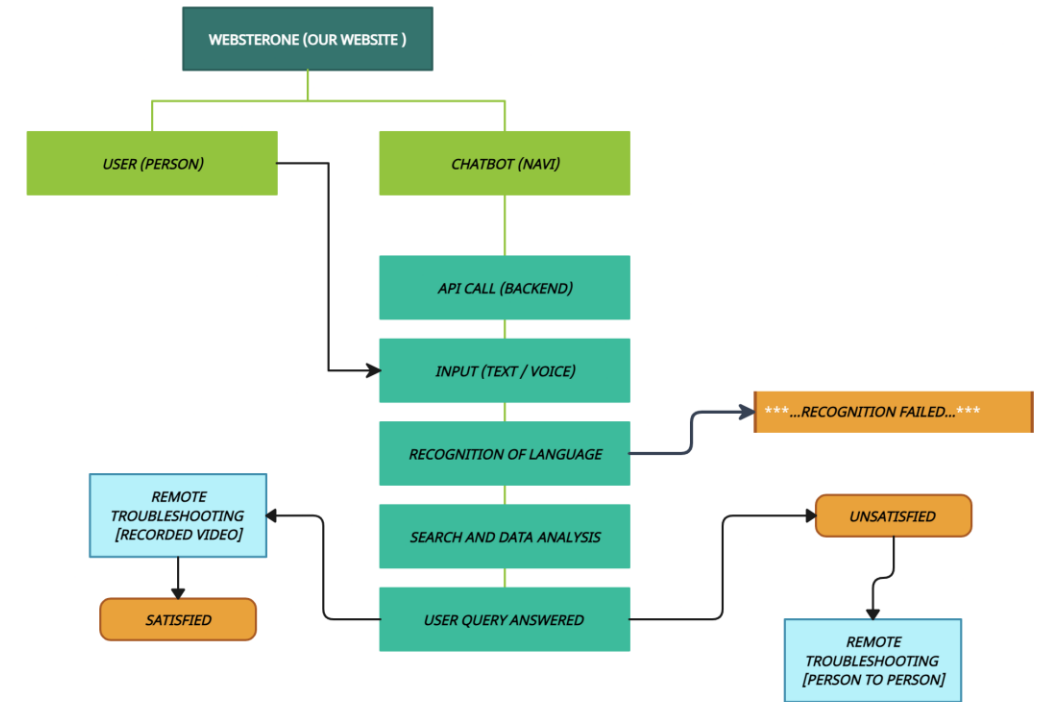
Idea/Approach Details

Idea solutions:

- Implementation of an **AI driven chatbot** named **NAVI** to aid in answering the ground queries by user to various maintenance activities.
- **Includes following operations it will perform:**
 - » analyze the limits of machinery and **their repairing requirements** .
 - » resolve any issue faced during maintenance. **Remote access** is available.
 - » addresses the queries in understandable way including voice assistant
 - » stores **and analyze the data of equipment and technology** provides safety and operating manual for various machines

Channels: Govt. portals, Electricity generating industries

Revenue Streams: Service based model



Our tech box:



Idea/Approach Details

Use Cases:

- **Secondary sector(manufacturing and processing units)--** can help in understanding the trends and pattern of a machinery to predict the faults and optimal timing of repair and replacement.
- **Human development sector** - training the staff/engineer /general people to operate the machines
- **Economical sector** -- analyzing the minimal cost of repair and minimizing the loss.
- **Customer care and help desk sector-** analyzing and repairing the faults of goods, and answering to ground queries
- **Research sector** -- understanding the need of new technologies and finding the optimum replacement for pre-existing machinery to boost production and minimize the loss.

Show stoppers:

- 1) **Voice assistant and accessibility** : AI driven voice assistant and accessibility features make it easy for general public as well as visually impaired persons.
- 2) **Remote troubleshooting assistant** : can streamline operations, reduce costs, improve uptime, and enhance the overall efficiency and effectiveness of maintenance and repair processes
- 3) **Faster problem authentication** : can perform failure analysis by identifying many problems related transmission of electricity and overload
- 4) **Multilingual assistant** : promote effective communication, safety, compliance, and customer satisfaction. ,enhances the ability to work across language boundaries and supports the needs of a diverse workforce or customer base.
- 5) **Safety Enhancement** : supports safety by identifying potential risks and suggesting maintenance actions to mitigate them, reducing workplace accidents. Provides a general user manual to operate.
- 6) **Anomaly Detection**: chatbot can identify anomalies or deviations from normal operating conditions, helping detect equipment malfunctions or potential issues before they escalate.

Team Member Details

Team Leader Name: Rahul Patel

Branch : **B.Sc**

Stream : **Phy. Sci. with CS**

Year : **1**

Team Member 1 Name: Ayush Pal

Branch : **B.Sc**

Stream : **Phy. Sci. with CS**

Year (I,II,III,IV):**I**

Team Member 2 Name: Sumit Gupta

Branch : **B.Sc**

Stream : **Phy. Sci. with CS**

Year (I,II,III,IV):**I**

Team Member 3 Name: Suta

Branch : **B.Sc**

Stream : **Phy. Sci. with CS**

Year (I,II,III,IV):**I**

Team Member 4 Name: Aman

Branch : **B.Sc**

Stream : **Phy. Sci. with CS**

Year (I,II,III,IV):**I**

Team Member 5 Name: Sushil

Branch : **B.Sc**

Stream : **Phy. Sci. with CS**

Year (I,II,III,IV):**I**

Team Mentor 1 Name: Vidhi Khanduja

Category (Academic/Industry):

Expertise (AI/ML/Blockchain etc):

Domain Experience (in years):

Team Mentor 2 Name: Type Your Name Here

Category (Academic/Industry):

Expertise (AI/ML/Blockchain etc):

Domain Experience (in years):