DRONACHARYA
Group of Institutions

SMART HACKS 2K24 β-EDITION

Problem Statement :

ChatBot to respond to text queries, pertaining to various Acts, Rules and Regulations applicable to Mining Industries.
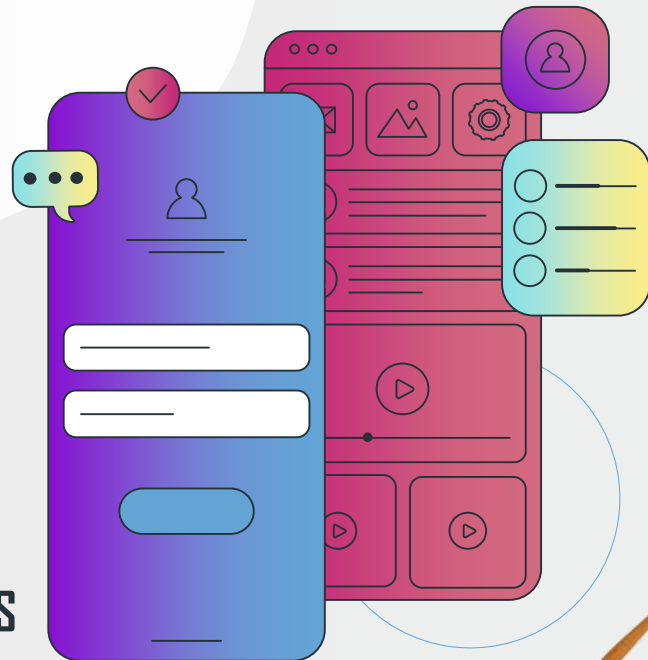
Team Name : SWA-COAL

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Team Leader Name : HASAN JANASHIN

Theme Name : SMART AUTOMATION/OPEN INNOVATION

College Name : DRONACHARYA GROUP OF INSTITUTIONS

Mentor Name : MR. SANDEEP MISHRA

THE PROBLEM

Problems we are trying to solve ! Is it really a problem?

Customer Pain Point !

- Limited Access to Information

- Confusion and Delays

- Complex Legal Landscape

- Impact on Industry Processes

- Operational Inefficiencies

- Need for Immediate Assistance

Is this product for ?

- ✓ Mining Industry Stakeholders

- ✓ Government Regulatory Bodies

- ✓ Legal Professionals
- ✓ Researchers and Academia

- ✓ General Public

- ✓ Consultants and Advisors

Concept & Key Elements :

- ❖ Information Database

- ❖ Artificial Intelligence (AI)

- ❖ Natural Language Processing (NLP)

- ❖ Query Categorization
- ❖ Security and Privacy Measures
- ❖ Continuous Learning and Updates
- ❖ 24/7 Availability

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THE SOLUTION/APPROACH

HOW ARE WE PLANNING TO SOLVE THE PROBLEM ?

Value Proposition of product ?

➢ Stakeholders can access timely and accurate information on Acts, Rules, Regulations.

➢ The Chatbot utilizes AI and NLP to efficiently understand and process diverse queries.

➢ User-Friendly Interface that intuitive interface makes it easy for stakeholders, regardless of technical expertise.

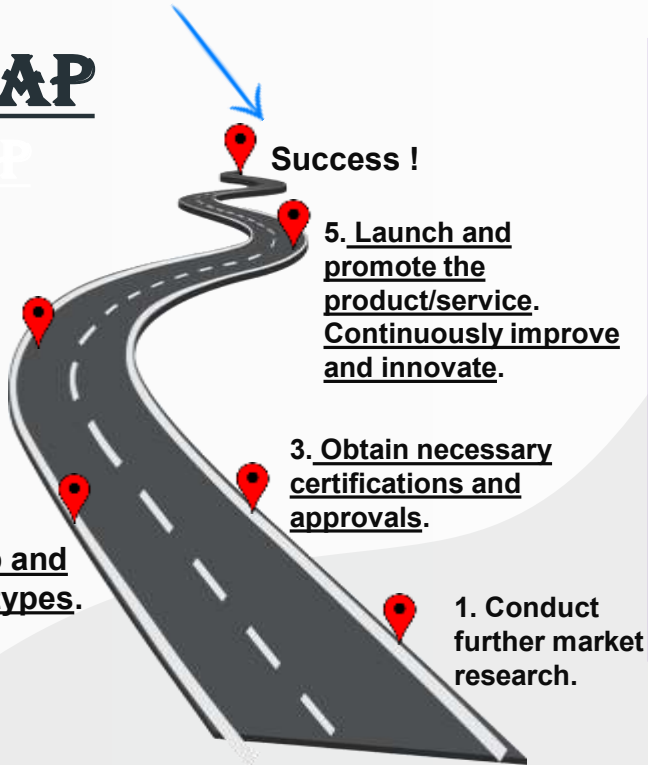➢ The Chatbot communicates its limitations and advises users to seek professional advice for critical legal matters.

Benefits Will Be Created ?

✓ Time Efficiency

✓ Improved Compliance

✓ Enhanced Productivity

✓ Informed Decision-Making

✓ Reduced Legal Risks

✓ User Empowerment

✓ Operational Streamling

✓ Global Reach

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ROADMAP

Success !

5. **Launch and promote the product/service.** Continuously improve and innovate.

4. **Establish partnerships and collaborations.**

3. **Obtain necessary certifications and approvals.**

2. **Develop and test prototypes.**

1. **Conduct further market research.**

Defining the problem, Research and analysis, Design and prototyping , Testing and validation, Refinement and optimization, Implementation and deployment
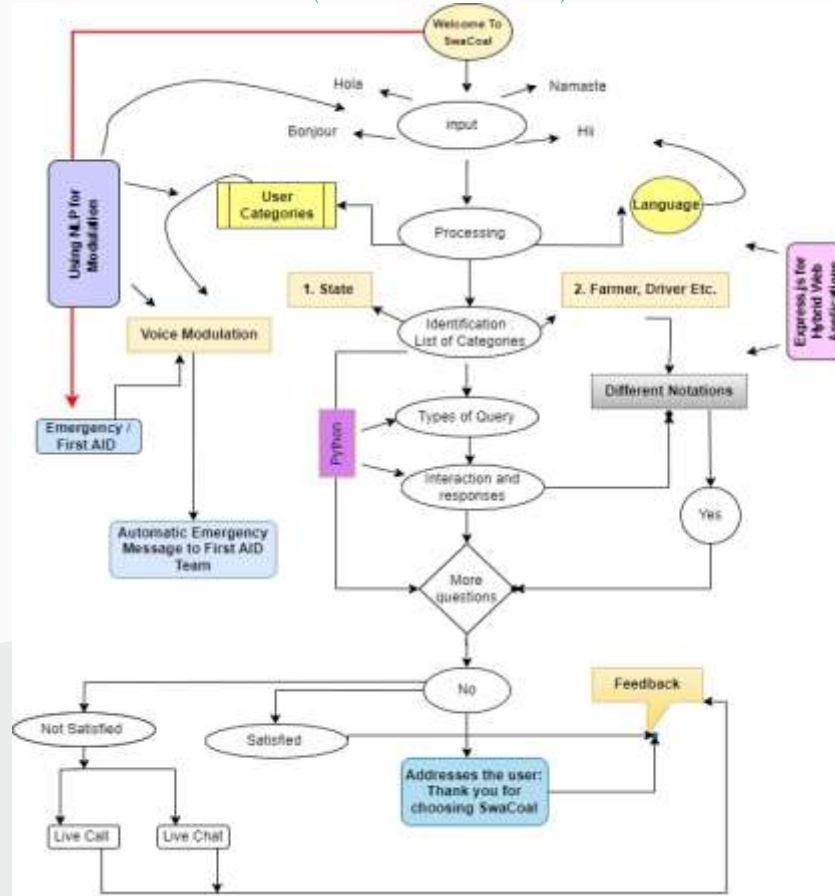
Technology Readiness Level (TRL) :

Prototype Demonstration (TRL 5-6)

➤ Improved efficiency, present safety hazards improving efficiency and reducing energy costs.

➤ PoC's : The technology concept is demonstrated. The feasibility of the technology is established.

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Flow-Chart :

05 BUSSINESS MODEL

Source of Revenue

❖ **Subscription Model**: Charge users a subscription fee for access to the 24/7 Chatbot service

❖ **Enterprise Licensing** : For Legal Firms.

❖ **Freemium Model** : For limited features.

❖ **Partnerships and Collaborations** : With CCL and Ministry of Coal.

❖ **Consulting and Training Services** : Provide consulting services, training programs, or workshops related to mining industry legal matters.

Viable Business Model ?

▪ We plan to stay nimble and adaptable in response to market changes and customer needs.

▪ Offer tiered subscription plans with industry specialization, free trials, and enterprise solutions.

▪ Provide premium data analytics and consulting services.

▪ Explore educational partnerships and consider international expansion for global reach.

Yes!

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MARKET OPPORTUNITY

THE SIZE OF OUR TARGET MARKET !

Total Addressable Market

➢ **Mining Companies** : Large-scale mining corporations.
➢ **Legal Professionals** : Lawyers, legal advisors, and consultants specializing in mining industry law who may use the Chatbot for quick access to legal information.
➢ **Government Regulatory Bodies**.
➢ **General Public**.

International Market:
The TAM extends globally, as mining operations and legal considerations are relevant across various countries and regions.

Benefits Will Be Created

❖ **For Coal, the market** for 2022-23, India imported 237.67 million tonnes of coal, including 87.97 million tonnes in July 2023.

❖ **For Coal,** In the third quarter of 2023, the US imported 1 million metric tons (MMst) of coal and the average price was $143.34 per short ton.

❖ The **US estimates that exports will increase to 100 MMst in 2023, then fall to 91 MMst in 2024 and rise to 95 MMst in 2025**.

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Use Case: Coal Industry Chatbot

➢ Scenario: A user, whether it's a <mark>Citizen, Coal Industry Professional, Researcher, Transporter, Farmer</mark> wants to enquire about various aspects of the coal industry to the obtain specific data or seek guidance related to coal mines challenges and help all the worker to get immediate First-Aid help.
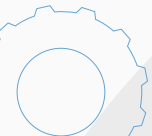
➢ Images of Prototype:

TEAM DETAILS :

Team Name: **BYTE BRIGADE**

Team Leader: HASAN JANASHIN   2ND   ECZ (Electronics and Computer Engneering)

Team Member 1:   ANTRA RANJAN   2ND   ECZ (Electronics and Computer Engneering)

Team Member 2:   MOHD AMMAR   2ND   ECZ (Electronics and Computer Engneering)

Team Member 3:   SACHIN SHARMA   2ND   ECZ (Electronics and Computer Engneering)

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THANKS!

Team : SwaCoal