**DESCRIPTION**

**Title:** Enhancing User Experience on the PGRKAM Digital Platform

**Abstract:**

The Punjab Employment Department's digital platform, www.pgrkam.com, faces a significant challenge in providing an efficient and user-friendly experience to job seekers and employers. Navigating through its various modules, including private sector jobs, government jobs, self-employment opportunities, foreign employment options, counselling services, and more, currently lacks guidance for users. This leads to inefficient and frustrating experiences as users manually search for information.

This abstract addresses the pressing need for an improved user experience on www.pgrkam.com by introducing a seamless user guidance mechanism. Our proposed solution aims to streamline user interactions and unlock substantial business potential. The core of this initiative involves deploying an intelligent chatbot as a digital assistant, powered by advanced transformers like GPT-3 and exemplified by models such as ChatGPT.

The objective of the chatbot is to swiftly and accurately respond to user queries while simplifying navigation across the PGRKAM digital platform. The chatbot system will be proficient in handling both text and voice queries in multiple languages, including Punjabi, English, and Hindi. Its focus areas encompass job searches, skill development, foreign counselling, and personalized job recommendations.

To enhance accessibility and usability, a multilingual screen reading module will be incorporated. Furthermore, the chatbot solution will include user history and preference tracking, adding a layer of personalization to enhance engagement and satisfaction.

From a business perspective, this enhancement is expected to increase user engagement and satisfaction, thereby attracting a larger user base. The project's outcome will be a user-friendly, chat-based interface that empowers job seekers and employers to effortlessly access information related to jobs, skill development, and foreign counselling via smartphones or laptops. This innovative solution aims to significantly reduce the time and effort required to navigate the digital platform, ultimately fostering a more seamless and productive user experience.

**Key Implementation Components:**

**1. Voice Recognition:**

- Implementation of a suitable speech recognition API or framework (e.g., Google's Speech Recognition API, CMU Sphinx) to enable voice input for chatbot interactions.

**2. Integration with Government Systems:**

- Establish secure API connections to access relevant government data and services, ensuring stringent data privacy and security compliance.

**3. User Training and Testing:**

- Train the chatbot on a dataset of sample interactions to continually improve its responses.

- Conduct usability testing with real users to gather feedback and make iterative improvements.

**4. Scalability and Maintenance:**

- Plan for scalability to accommodate increasing user demand.

- Establish a maintenance schedule for regular updates, including language model enhancements, improved responses, and issue resolution.

**5. User Education:**

- Provide clear instructions and guidance on effective chatbot usage, especially for voice interactions.

**6. Monitoring and Analytics:**

- Implement analytics tools to monitor user interactions, gather insights, and track chatbot performance.

- Utilize data analytics to refine the chatbot's responses and capabilities continually.

**7. Launch and Promotion:**

- Develop a strategic launch plan for both the government website and Android app, incorporating promotional efforts to encourage user adoption.

**8. Feedback Mechanism:**

- Include a user-friendly feedback mechanism for reporting issues and providing feedback, facilitating ongoing improvement.

**9. Prioritize User Privacy:**

-Implement robust data privacy measures, secure HTTPS connections, and transparent privacy policies to ensure user data is protected at every interaction with our website.

**Technologies Used:**

- Serif draw +

- React JS

- DJANGO

- HTML

- Cascading Style Sheets (CSS)

- JavaScript

- Machine Learning

- Natural Language Processing

- Large Language Models

- Generative Pre-trained Transformer 3 (GPT-3)

- Google’s Speech Recognition API

- Carnegie Mellon University (CMU) Sphinx

- Analytics Tools