SMART INDIA HACKATHON 2023

# Basic Details of the Team and Problem Statement

**Organization Name**: Government of Himachal Pradesh

**PS Code**: SIH1304

**Problem Statement Title**: PGRKAM web application ( www.pgrkam.com) and the PGRKAM Android application of the Punjab Government provides employment data to the prospective candidates. The platform has a sizeable number of user base but it lacks integrated analytics tools to understand how the users are consuming the information.

**Team Name**: HashCode

**Team Leader Name**: Deepak Patil

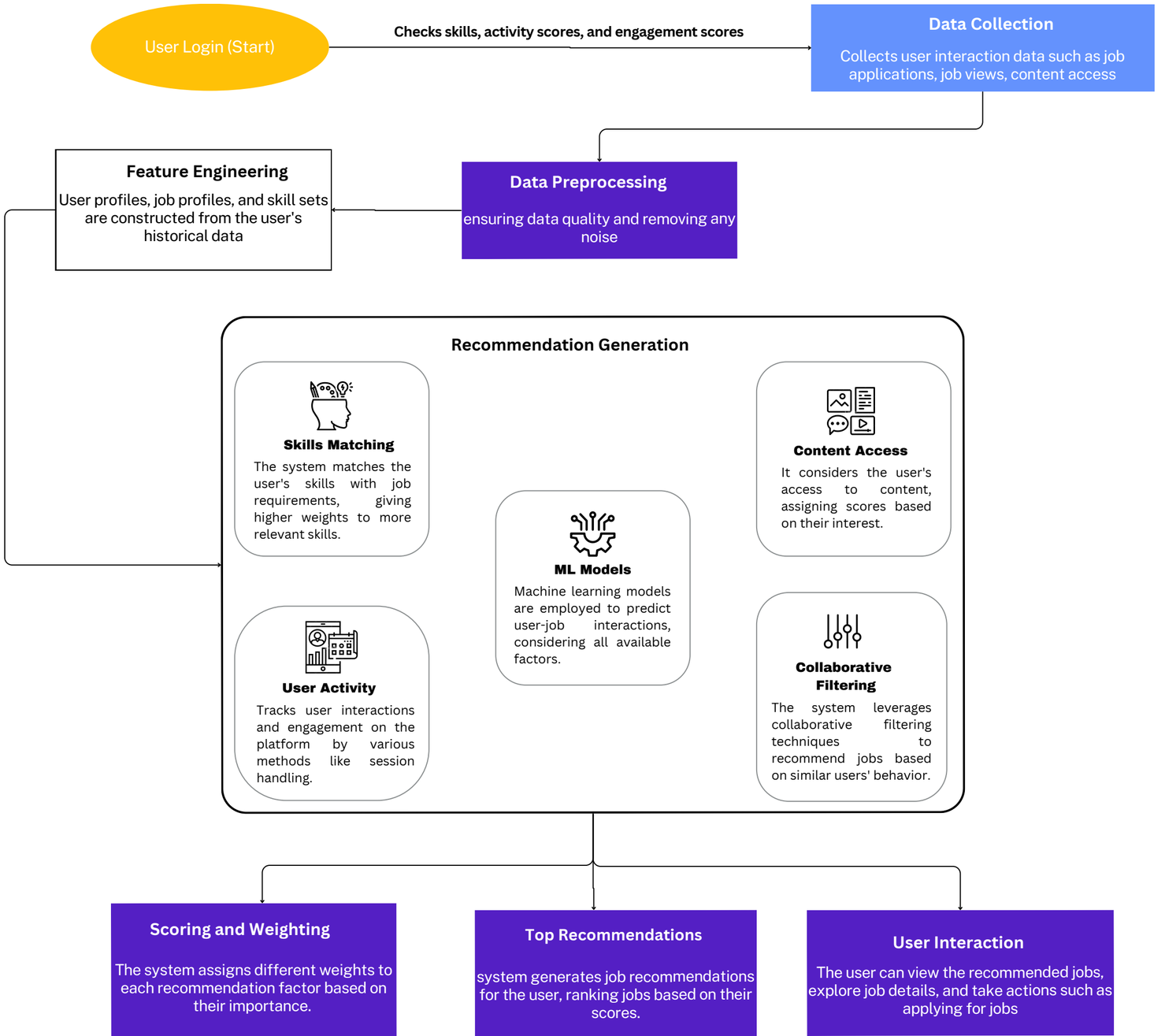
**Institute Code (AISHE):** U-0270

**Institute Name**: Institute of Engineering & Technology, Devi Ahilya Vishwavidyalaya, Indore(M.P.)

**Theme Name**: Health Care/ MedTech/ BioTech

**ResearchDoc: https://bit.ly/researchdoc1304**

## Workflow Diagram



# Idea/ Approach Details

- User registration involves **onboarding questions** through an intuitive interface, capturing **personal details, demographics, and job preferences**.
- Activity of the user on website and mobile app will be **monitored** continuously using **analytics tools, event tracking, heatmaps** etc.
- **Initial job recommendations use onboarding answers and skills**. Further suggestions consider **user feedback**, employing techniques like **keyword matching, machine learning, and collaborative filtering** for a personalized user experience.
- Creating a feedback loop is used to **analyze the success and failure rates of user profiles in relation to job requirements**, that helps in future recommendations.
- The **analytics dashboard** will contain analytics about every aspect of user on the website like demographics, app usage patterns, & evolving user activity trends, and will show these analytics with intuitive and attractive visualization tools.
- These analytics will then be used to recommend training videos and job applications based on user preferences that will **increase job recommendation accuracy**. This data supports **trend forecasting**, enabling the government to **align videos and job opportunities with market trends and future user needs**.
- The application **recommends job profile-specific learning**, using a **Virtual Career Coach** offering guidance and learnings. It also hosts **virtual workshops and webinars** covering job search strategies, interview techniques, and career development.
- The application creates a **community** like space for **professional networking environmen**t, accompanied by **recommending articles relevant to user profiles**. It enhances **user engagement** and provides valuable insights **tailored to their specific job interests.**
- Various **contests will be conducted within the community** to help users showcase themselves as **strong job candidates for potential employers**.
- Users can closely **track their job applications** via the portal and receive **timely notifications for relevant job postings.**
- The application will offer **multilingual support**, and it will feature a **chatbot to enhance user accessibility** within the application.

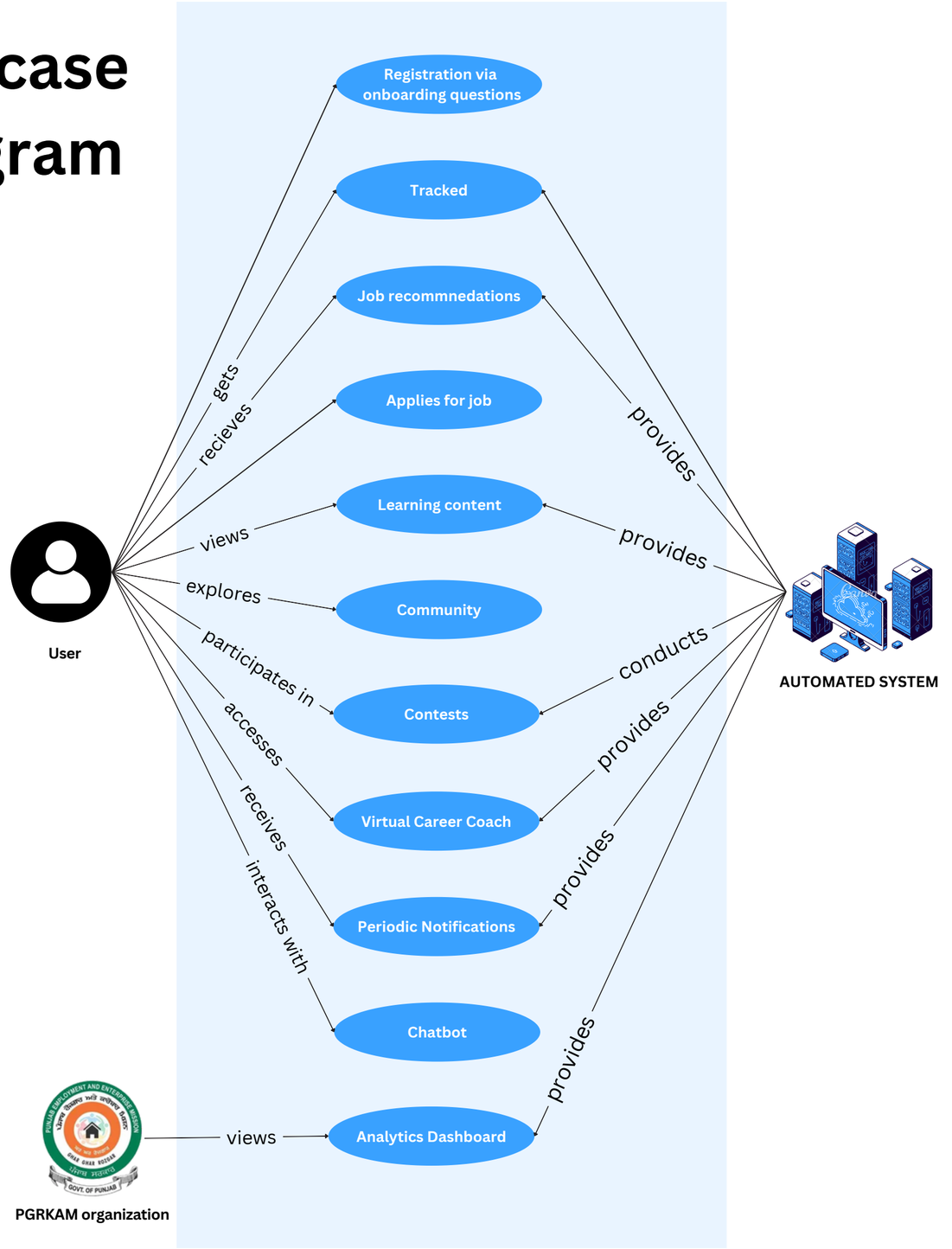
**Initial recommendations:**
Job suggestions based on user input and skills.

**Analyzing feedback:**
Assessing user response to initial suggestions.

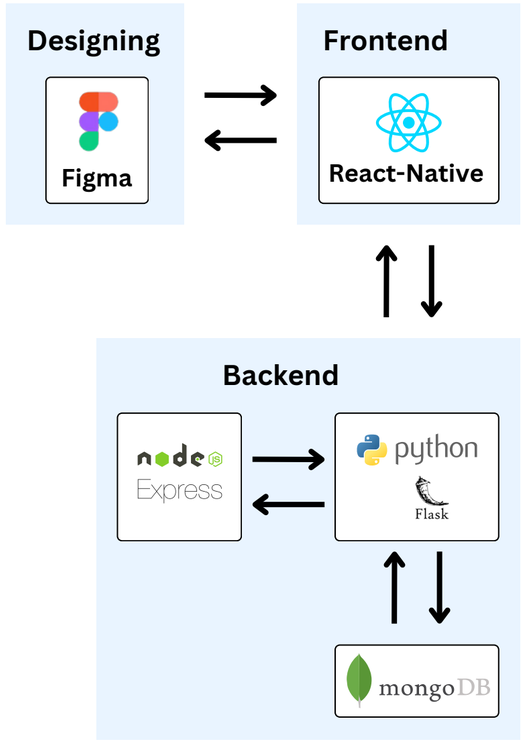
**Recommendation techniques:**
Using keyword matching, ML models, collaborative filtering, and hybrid systems.

**Tailored user experience:**
Providing personalized and relevant job opportunities to enhance overall satisfaction.

# Use case Diagram




# TechStack




# Dependencies

- Internet Connection
- Electronic device
- Mobile Verification

| Feature | Purpose |
|---|---|
| **Data analytics for recommendation** | Data analytics informs user preferences for **training video recommendations and job applications**, helping prioritize popular criteria. It identifies **user discovery channels, provides location-specific insights**, and assesses job recommendation accuracy. These insights enable proactive alignment with **market trends and user needs for future content and job opportunities.** |
| **Different Algorithms for personalized recommendations** | The app utilizes **Collaborative Filtering, Content-Based Filtering, and Genetic Algorithms** to enhance job recommendations. Collaborative Filtering aligns users with similar profiles, Content-Based Filtering matches jobs with skills, and Genetic Algorithms optimize suggestions based on user interactions. This dynamic approach **tailors recommendations to individual needs and market trends**, ensuring effectiveness. |
| **Virtual Career Coach** | This coach will provide **guidance and personalized learning resources** to users, **enhancing their job-related skills and knowledge**. The application will also host **virtual workshops and webinars** covering job search strategies, interview techniques, and career development, providing users with a comprehensive resource for career growth. |
| **E- Community** | The app fosters a **professional community**, suggesting **relevant articles and job interests**. It encourages **engagement through contests**, helping **users showcase skills to potential employers**, promoting job opportunities and tailored insights. |
| **Analytics Dashboards** | The analytics dashboard will provide **in-depth insights into various aspects of user behavior on the website**. It will include demographic information ,app usage patterns, and evolving user activity trends. These analytics will be presented using intuitive and attractive visualization tools. |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**Branch : BE** **Stream : CSE** **Year : IV**

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