Problem Statement: Conversational Bot for Resume Building

Objective

In today's competitive job market, job seekers often struggle to create well-structured and compelling resumes due to a lack of clarity on essential sections, professional wording, and formatting. Manually crafting a resume can be time-consuming, and candidates often miss out on key information that could strengthen their profile.

To address this challenge, we propose developing an AI-powered **Conversational Resume** Assistant that engages users in a guided conversation to collect relevant information and generate a complete, professional-quality resume.

Requirements

- **Conversational Data Collection:** The bot will engage users in a structured conversation to fill in key resume sections such as personal details, education, work experience, skills, and achievements.
- **Job-Specific Resume Suggestions:** The bot will allow users to input a job description and will provide tailored recommendations for skills, job descriptions, and achievements based on industry best practices.
- **Keyword Optimization for ATS:** The system will analyze the resume and suggest improvements to enhance Applicant Tracking System (ATS) compatibility.
- **Basic Grammar & Formatting Check:** The bot will highlight spelling mistakes, grammar issues, or overly long sentences to improve the quality of the resume.
- **Resume Scoring System:** The system will provide an automated score based on content quality, completeness, and keyword optimization.
- **Custom Resume Templates:** Users will be able to choose from at least two different templates (e.g., compact vs. detailed format).
- **Efficient & Optimized Resume Generation:** The system must generate a resume within 20 seconds after data input to ensure a seamless experience.
- **Basic Sentiment Analysis:** The bot will analyze different resume sections to provide feedback on tone and phrasing, ensuring positive and professional wording.
- **Generate and Export Resumes:** Automatically format and generate a structured resume that can be exported in various formats (PDF, DOCX).

Additional Functionalities:

- **Admin Panel for Credit Management:**
  - Users can request extra credits for resume generation, which will be reviewed and approved by the admin.
- **Credit System:**
  - Each resume generation will consume 1 credit.
  - Every user will receive 3 free credits daily, refreshing every 24 hours.
  - Further credit requests must be manually approved by the admin.
- **Role-Based Access Control (RBAC):**
  - Two user roles: Normal Users & Admins.
  - Normal users can generate resumes within their available credits.
  - Admins can approve credit requests and access analytics.
- **Multiple Authentication Options:**
  - Platform should have at least 2 authentication methods.
  - First, Users should be able to log in via username & password (in-house authentication system).
  - For the other, users can log in via any popular authentication service (e.g., Google, GitHub, etc.).
- **Admin Dashboard with Analytics:**
  - Admins should have a dashboard displaying basic analytics related to resume generation.
  - Extra brownie points for additional insights such as most-used templates, common resume errors, user engagement metrics, etc.
- **Rate Limiting & Resource Management:**
  - Appropriate rate limits should be enforced on backend services to prevent overutilization.
  - Prevent abuse by limiting the number of resume generations per minute/hour per user.

Evaluation Criteria

- **Functionality:** Completeness of the required features and adherence to the requirements.
- **System Design:** Scalability, efficiency, and the ability to handle high traffic.
- **Performance:** Timely processing and delivery of resumes while ensuring smooth backend operation.
- **Security & Compliance:** Proper implementation of authentication, RBAC, and rate-limiting mechanisms.
- **Innovation:** Additional enhancements beyond the required features will receive extra recognition.

By leveraging AI and NLP, this chatbot will simplify resume creation while maintaining high-quality, ATS-friendly formatting. The addition of admin-controlled credits, authentication layers, analytics, and system constraints will make the challenge more competitive and realistic for a hackathon setting.