Hackathon Project Phases Template for the **SMART RESUME GENERATOR** project.

Hackathon Project Phases Template

Project Title:

Smart Resume Generator Customised Resumes for Every Opportunity

Team Name:

SPARTANS

Team Members:

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Phase-1: Brainstorming & Ideation

Objective:

"To design and develop an intelligent resume generator that utilizes AI-powered algorithms to create tailored, high-quality resumes for job seekers, increasing their chances of landing their desired role."

Key Points:

1. **Problem Statement:**
    - “Despite the abundance of resume-building resources, job seekers continue to struggle with creating effective, tailored resumes that showcase their skills and experiences, resulting in low response rates and missed opportunities.
    - The existing resume-building solutions often require extensive manual customization, lack personalization, and fail to optimize resumes for applicant tracking systems (ATS), leading to a significant gap between job seekers' expectations and the reality of the job market."
2. **Proposed Solution:**
    - 1. AI-powered Resume Generation
    - 2. Automated Keyword Optimization
    - 3. Real-time Job Matching
    - 4. User-Friendly Interface
    - 5. Cloud-Based Resume Storage
    - 6. Collaborative Review & Feedback
3. **Target Users:**
    - 1. Job Seekers: Fresh graduates, entry-level professionals, and experienced individuals looking for new job opportunities.
    - 2. Career Changers: Professionals transitioning to new industries or roles.
    - 3. Freelancers: Independent contractors and freelancers seeking to showcase their skills and services.
    - 4. Students: University students and recent graduates seeking internships or entry-level positions.
    - 5. Career Counselors: Professionals assisting clients with resume building and job search strategies.
    - 6. Recruitment Agencies: Agencies seeking to streamline their resume screening and candidate matching processes.
4. **Expected Outcome:**
    - 1. Increased Efficiency: Automate resume building, saving users time and effort.

- ○ 2. Improved Resume Quality: Generate high-quality, tailored resumes that showcase users' skills and experiences.
- ○ 3. Enhanced Job Matching: Provide users with relevant job suggestions, increasing their chances of landing their desired role.
- ○ 4. Better Career Outcomes: Empower users to achieve their career goals through effective resume building and job matching.
- ○ 5. Increased User Engagement: Offer a user-friendly interface, encouraging users to actively manage their resumes and job searches.
- ○ 6. Reduced Unemployment: Contribute to reducing unemployment rates by connecting job seekers with relevant job opportunities.

Phase-2: Requirement Analysis

Objective:

Defining the Functional and Non-functional requirements for the Smart Resume Generator.

Key Points:

Functional Requirements:

1. User Registration and Login

2. Resume Building with AI-powered suggestions

3. Customization options for resume templates, fonts, and colors

4. Integration with job databases for real-time job matching

5. Automated keyword optimization for ATS compatibility

6. Cloud-based resume storage and management

7. Collaborative review and feedback features

Non-Functional Requirements:

1. User-friendly interface with intuitive navigation

2. Fast and accurate AI-powered resume generation

3. High-quality, visually appealing resume output

4. Secure and reliable cloud-based storage

5. Scalability to accommodate a large user base

6. Compatibility with various devices and browsers

7. Regular updates and maintenance for optimal performance

Performance Requirements:

1. Response time: < 3 seconds for resume generation

2. Accuracy: > 90% for AI-powered suggestions

3. Uptime: > 99.9% for cloud-based storage

4. Data security: encryption and secure authentication protocols

Usability Requirements:

1. Easy registration and login process
2. Intuitive resume building and customization options
3. Clear and concise job matching results
4. Simple and secure collaborative review and feedback features

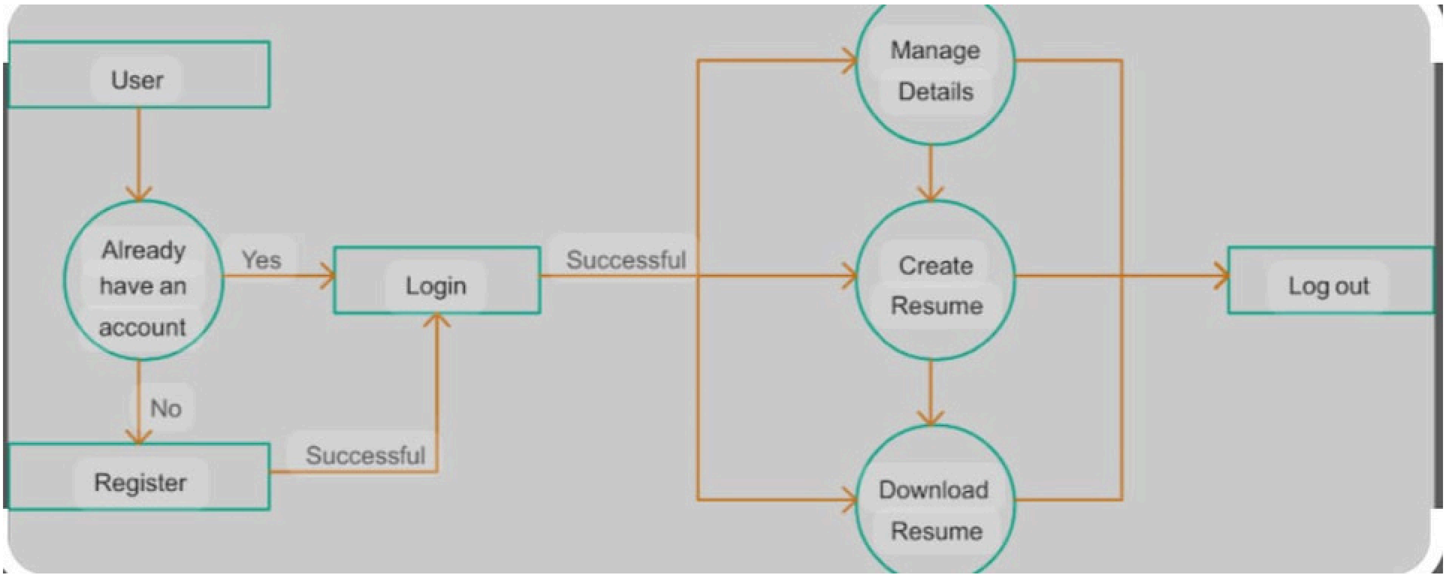
Security Requirements:

1. Data encryption for user information and resumes
2. Secure authentication and authorization protocols
3. Regular security updates and patches
4. Compliance with relevant data protection regulations

Phase-3: Project Design

Objective:

Develop the architecture and user flow of the application.



Key Points:

Project Architecture

1. Frontend: User Interface built using HTML, CSS, JavaScript, and a framework like React or Angular.

2. Backend: Server-side logic built using a language like Python, Java, or Node.js, and a framework like Django, Spring, or Express.

3. Database: Cloud-based database management system like AWS Aurora, Google Cloud SQL, or Microsoft Azure SQL Database.

4. AI/ML Engine: Integration with AI/ML libraries like TensorFlow, PyTorch, or scikit-learn for resume analysis and generation.

System Components

1. User Module: Handles user registration, login, and profile management.

2. Resume Builder Module: Allows users to input their information and generates a customized resume.

3. AI-powered Resume Analysis Module: Analyzes user input and generates suggestions for improvement.

4. Job Matching Module: Integrates with job databases and suggests relevant job openings to users.

5. Collaborative Review Module: Enables users to share their resumes with others for review and feedback.

Data Flow

1. User Input: Users enter their information and resume details.

2. Resume Generation: The system generates a customized resume based on user input.

3. AI-powered Analysis: The AI/ML engine analyzes the resume and provides suggestions for improvement.

4. Job Matching: The system suggests relevant job openings to the user.

5. Collaborative Review: Users share their resumes with others for review and feedback.

User Interface

1. Responsive Design: A mobile-friendly and responsive design to ensure accessibility across devices.

2. Intuitive Navigation: Clear and concise navigation to guide users through the resume building and job matching process.

3. Real-time Feedback: Instant feedback and suggestions for improvement during the resume building process.

Technical Requirements

1. Cloud Hosting: Host the application on a cloud platform like AWS, Google Cloud, or Microsoft Azure.

2. Scalability: Design the system to scale horizontally to handle increased traffic and user growth.

3. Security: Implement robust security measures to protect user data and ensure compliance with relevant regulations.

Phase-4: Project Planning (Agile Methodologies)

Objective:

Break down development tasks for efficient completion.

Sprint	Task	Priority	Duration	Deadline	Assigned To	Dependencies	Expected Outcome
Sprint 1	Environment Setup & API Integration	🔴 High	6 hours (Day 1)	End of Day 1	Member 1	Python, Streamlit setup	API connection established & working
Sprint 1	Frontend UI Development	🟡 Medium	2 hours (Day 1)	End of Day 1	Member 2&4	API response format finalized	Basic UI with input fields
Sprint 2	Error Handling & Debugging	🔴 High	3 hours (Day 2)	Mid-Day 2	Member 3	API logs, UI inputs	Improved API stability
Sprint 3	Final Presentation & Deployment	🟢 Low	1 hour (Day 2)	End of Day 2	Entire Team	Working prototype	Demo-ready project

Sprint Planning with Priorities

Sprint 1 – Setup & Integration (Day 1)

(🔴 **High Priority)** Set up the **environment** & install dependencies. (🔴 **High Priority)** Integrate **Google Gemini API**. (🟡 **Medium Priority)** Build a **basic UI with input fields**.

Sprint 2 – Core Features & Debugging (Day 2)

(🔴 **High Priority)** Implement **search & comparison functionalities**. (🔴 **High Priority)** Debug API issues & handle **errors in queries**.

Sprint 3 – Testing, Enhancements & Submission (Day 2)

(🟡 **Medium Priority)** Test API responses, refine UI, & fix UI bugs. (🟢 **Low Priority)** Final **demo preparation & deployment**.

Phase-5: Project Development

Objective:

Implement core features of the SMART RESUME GENERATOR.

Key Points:

1. **Technology Stack Used:**
   - **Frontend:** Streamlit
   - **Backend:** Python
   - **Programming Language:** Python
2. **Development Process:**
   - Implement UI components and routing
     - Implement state management and API integration
   - Set up backend framework and implement API endpoints
   - Implement authentication, authorization, and error handling
   - Unit testing, integration testing, and user acceptance testing

3. **Challenges & Fixes:**
   - **Challenges:** Users may resist adopting the new resume generator tool.
     - **Fix:** Provide clear user documentation, training, and support to ensure a smooth transition.
   - **Challenges:** User data and resumes may be vulnerable to security breaches.
     - **Fix**: Implement robust security measures, including encryption, access controls, and regular security audits.

Phase-6: Functional & Performance Testing

Objective:

Ensure that the SMART RESUME GENERATOR works as expected.

Test Case ID	Category	Status	Tester
TC-001	Functional Testing	✅ Passed	Tester 1
TC-002	Functional Testing	✅ Passed	Tester 2
TC-003	Performance Testing	⚠ Needs Optimization	Tester 3
TC-004	Bug Fixes & Improvements	✅ Fixed	Developer
TC-005	Final Validation	❌ Failed - UI broken on mobile	Tester 2
TC-006	Deployment Testing	🚀 Deployed	DevOps

Final Submission

1. **Project Report Based on the templates**
2. **GitHub/Code Repository Link**
3. **Presentation**