

CareerSpark – AI Career Companion

1. Introduction

CareerSpark is an AI-based Android application that aims to guide students and job applicants through their career development journey. CareerSpark's USP lies in its ability to provide intelligent career advice, resume recommendations, skill recommendations, and interview preparation using LLaMA 2. As a virtual career coach, CareerSpark bridges the gap between academic learning and real-world professional readiness.

2. Objective

CareerSpark's mission is to provide personalized, intelligent career advice to its users who typically require mentorship or advice. It empowers users with AI-driven insights and actionable suggestions, addressing the typical problem of career uncertainty and skill development planning.

3. Background Information

The transition from study to work is a critical stage in the life of a student, typically followed by career path confusion, skills confusion, and confusion regarding how to professionally brand oneself. Most students struggle to access timely, personalized advice due to limited access to mentors, career counselors, or professional networks.

With advances in artificial intelligence and natural language, big language models like LLaMA 2 have become magnificent assets that are able to approximate human dialogue, examine text, and provide intelligent recommendations. The characteristics of the ability to learn the possibility to build digital personal assistants that would be able to guide users to craft resumes, identify careers, and prepare them for interviews from the smartphone platform.

With the broad popularity of mobile-first platforms and increasing user familiarity with conversational AI, there is increasing potential to use AI for career development and advice. With the integration of Android technology and LLaMA 2, the CareerSpark app aims to deliver an on-demand, tailored career coaching experience, helping users build confidence, readiness, and concentration as they move toward their career goals.

4. Market Research and Motivation

In the current competitive job market, students and first-career professionals often have difficulty locating compatible career alternatives, interviewing, and optimizing their resumes. Traditional career support structures like university career services or professional coaching might not be available, focused, or on-demand.

The advent of AI and large language models such as LLaMA 2 opens up new opportunities to offer smart, scalable, and personalized career guidance. Over 60% of graduates report that they are not adequately equipped for real job application, and tools such as resume builders and mock interview websites are rapidly gaining popularity, according to LinkedIn's Workforce Report (2023).

Mobile learning and self-assessment apps are also becoming popular, with career-specific apps like LinkedIn Learning, Pathrise, and Resume AI being widely used. Nevertheless, the majority of these apps are either subscription-based, too broad, or not interactive enough.

CareerSpark bridges this gap by offering AI-powered, real-time career guidance in the form of a mobile app. Its value proposition is combining resume review, skill recommendations, and interview preparation — all via LLaMA 2 — to allow users to take control of their own career growth and do so confidently.

5. Proposed Solution

CareerSpark offers a set of interactive resources to help users make informed career decisions. Upon launching the app, users are greeted with a number of features such as Career Chat, Resume Review, Skill Suggestions, and Interview Readiness.

In the Career Chat activity, users can enter career queries and have LLaMA 2 return answers in the form of a simulated conversation with a mentor. The Resume Review feature allows users to paste or upload the content of their resume, which LLaMA 2 analyzes in order to offer recommendations for grammar, structure, and clarity enhancements.

Under Skill Suggestion, individuals can set their career goals (e.g., "I want to be a data analyst") and receive a step-by-step course on the skills, tools, and certifications they need to learn. Finally, Interview Readiness lets individuals practice with standard questions and receive suggested answers, which boosts confidence.

LLaMA 2 is integrated via a Python Flask backend, with the queries of the users being directed via a REST API. LLaMA 2 processes the input and returns tailored responses in real-time. This integration is of the sort where all suggestions are context-sensitive, making the guidance increasingly accurate, relevant, and useful.

6. Technology Stack

Frontend: Android Studio (Java), XML for layouts, Retrofit for API calls

Backend: Python (Flask), LLaMA 2 via llama-cpp-python or HuggingFace API

Communication: REST API using JSON

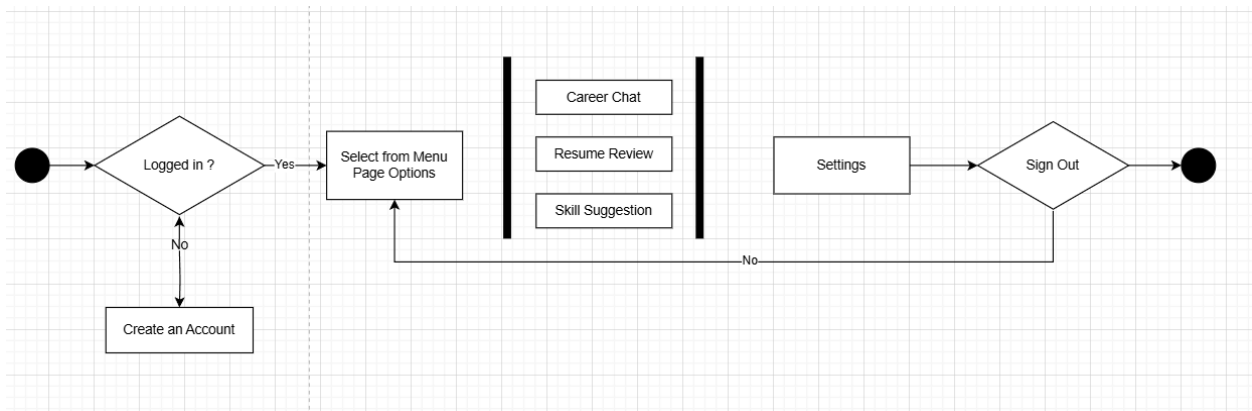
Storage: (Optional) Firebase for user profile information

7. Development Methodology

I will be using the Agile development process, which will enable me to develop incrementally through weekly sprints. Agile suits this project as it allows me to test at regular intervals, rapid iteration, and continuous feedback. This will allow me to iterate over key features like career chat and resume critique based on user and tutor feedback without complicating development too much.

8. UML Diagram

Figure (1) illustrates the UML Activity Diagram for CareerSpark – AI Career Companion. It demonstrates how a user interacts with the app from login to utilizing features such as Career Chat, Resume Review, Skill Recommendations, concluding with profile updates or logout. This flow ensures a seamless and intuitive user experience.



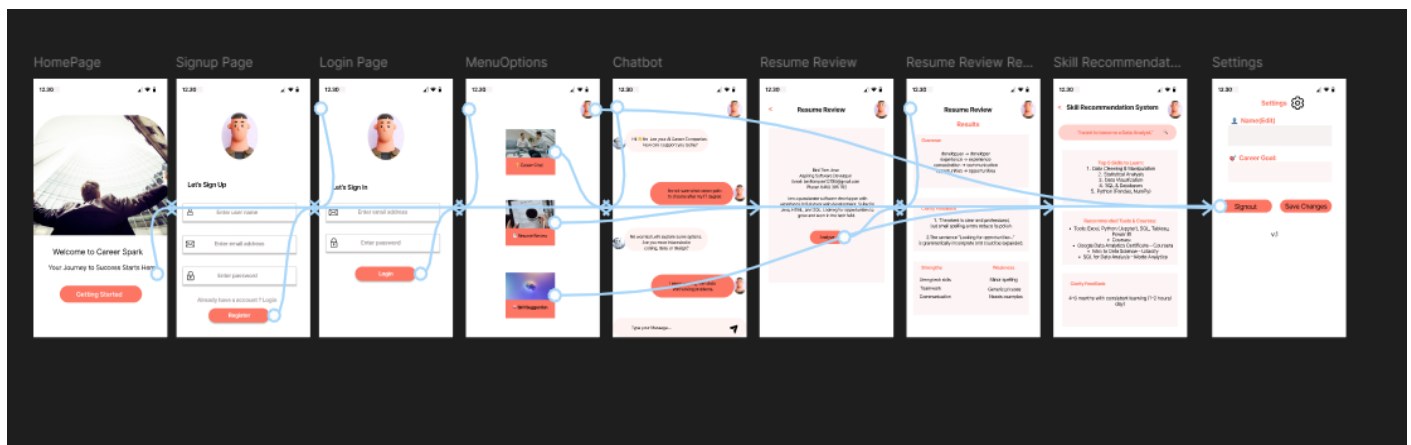
Figure(1)

9. Prototypes and Wireframes

Prototype Link :

<https://www.figma.com/proto/QrRwJW1s6YvLMhsW4qtAeQ/Untitled?node-id=1-4&p=f&t=YB8HX9gVnRNvKNds-1&scaling=min-zoom&content-scaling=fixed&page-id=0%3A1>

Prototype :



Wireframes:

1. HomePage

12.30



Welcome to Career Spark

Your Journey to Success Starts Here.

[Getting Started](#)

2. SignUp Page

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Let's Sign Up



Enter user name



Enter email address



Enter password

Already have a account ? Login

Register

3. Signin Page

12.30



Let's Sign In



Enter email address



Enter password

Login

4. MenuOptions

12.30



5. Resume Review

12.30



Resume Review



Binil Tom Jose
Aspiring Software Developer
Email: biniltomjose12780@gmail.com
Phone: 0468 395 792

I am a passionate software developer with experience in full stack web development. Skilled in Java, HTML, and SQL. Looking for oppertunities to grow and learn in the tech feild.

Analyze

6. Resume Review Results

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Resume Review



Results

Grammar

developper → developer
experiance → experience
communication → communication
oppertunities → opportunities

Clarity FeedBack

1. The intent is clear and professional, but small spelling errors reduce its polish.
2. The sentence "Looking for opportunities..." is grammatically incomplete and could be expanded.

Strengths

Strong tech skills
Teamwork
Communication

Weakness

Minor spelling
Generic phrases
Needs examples

7. Skill Recommendation System

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< Skill Recommendation System



"I want to become a Data Analyst."



Top 5 Skills to Learn:

1. Data Cleaning & Manipulation
2. Statistical Analysis
3. Data Visualization
4. SQL & Databases
5. Python (Pandas, NumPy)

Recommended Tools & Courses:

- Tools: Excel, Python (Jupyter), SQL, Tableau, Power BI
 - Courses:
- Google Data Analytics Certificate – Coursera
 - Intro to Data Science – Udacity
- SQL for Data Analysis – Mode Analytics

Clarity FeedBack

4–6 months with consistent learning (1–2 hours/day)

8. Settings

12.30



Settings



Name(Edit)



Career Goal:

Signout

Save Changes

v.1

10. Requirements and User Stories

a. Requirements

- The user should be able to create and edit a minimum profile with his/her name and career goal.
- The user should be able to interact with AI for career-related questions using a chat interface.
- The user should be able to paste or type resume content and receive feedback from AI.
- The app should provide skill recommendations based on the career goal of the user.
- The user should be given access to prebuilt interview questions and answers using AI.
- The user can logout and erase saved data from the settings page.
- The system should interact with an LLaMA 2-driven backend using REST APIs.
- User inputs should be validated and handled gracefully.

b. User Stories

1. User Story 1:

a) Statement:

As a user, I would like to be able to ask career-related questions so that I can get advice from the AI.

b) Acceptance Criteria:

- The chat screen accepts and shows user input.
- AI gives a relevant and understandable answer.
- The conversation is shown in a chat format with timestamps.

c) **Estimation:** 5 hours

d) **Priority:** High

2. User Story 2

a) **Statement:**

As a user, I would like to paste my resume and receive AI feedback on it.

b) **Acceptance Criteria:**

- User can paste or type text into a multiline text input field.
- "Analyze" button triggers AI API call.
- Feedback includes grammar correction, clarity suggestions, and strengths/weaknesses.

c) **Estimation:** 6 hours

d) **Priority:** High

3. User Story - 3

a) **Statement:**

As a user, I should be given suggestions for skills tailored to my career goal.

b) **Acceptance Criteria:**

- User types or selects a career goal.
- AI gives 5 key skills, learning aids, and time to learn.
- Results are displayed in a plain, scrollable card.

c) **Estimation:** 4 hours

d) Priority: Medium

4. User Story -4

a) Statement:

As a user, I want to edit my name and career goal in settings to personalize my experience.

b) Acceptance Criteria:

- a. Editable text fields for name and goal are present in settings.
- b. "Save" button stores updates locally or to the backend.
- c. Changes reflect on the home and profile sections.

c) Estimation: 3 hours

d) Priority: Low

11. Conclusion

CareerSpark will provide users with smart, AI-powered career advice in mobile format. By combining Android development and the power of LLaMA 2, the app will deliver real-time, customized recommendations. The project is an example of practical LLM integration and addresses actual student issues with innovation and ease.

12. Background Research and Selection Rationale

Before concluding the idea of CareerSpark – AI Career Companion, extensive research was conducted in various areas of career development platforms, mobile productivity apps, and the use of AI in personalized guidance. LinkedIn Learning, career websites of government agencies, and technical reports for LLaMA 2 hinted at the increased need for intelligent, accessible tools for career advice among students and graduates. The selection of this project was motivated by a growing mismatch between scalable mentoring and resume guidance, along with the potential of open-source LLMs like LLaMA 2 to provide real-time customized recommendations. Additionally, the porting of AI-powered chat systems onto smartphones proved the feasibility and relevance of developing a smart career guide app on Android Studio and Java.

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