



# Indian Institute of Information Technology Una Himachal Pradesh

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Date: 28-02-2025

## Review I Project Phase – III(CSL801)

<b>Students Name</b>	Divyank Sharma Harshit Kumar Kanhaiya Kumar Gupta	<b>Roll No.</b>	21119 21121 21125
<b>Batch No.</b>	B10	<b>Semester</b>	VIII
<b>Branch</b>	Computer Science & Engineering	<b>Supervisor</b>	Mrs. Nisha

### 1. Title of the Project – PowerRef : Application for Recommending Job Referrals

### 2. Introduction :

In the competitive job market, having the right referral can significantly boost a candidate's chances of success. However, identifying the most impactful referral is often challenging. This app addresses this issue by recommending the strongest referral based on the user's target company and job role. It uses web scraping and a recommendation algorithm to analyze and suggest optimal referral opportunities.

In addition to this, the app offers tools like a resume builder, company search, and a dashboard for managing and tracking referrals. Unlike general networking platforms, it focuses specifically on enhancing job application outcomes through strategic referrals.

### 3. Problem Definition:

Job seekers often struggle to identify and leverage the most effective referrals for their job applications. Platforms like **LinkedIn** and **Top mate** provide general networking tools but lack specialized features that can prioritize referrals based on relevant criteria such as alumni connections, experience, and position within a company. This concern reduces a candidate's chances of standing out to recruiters and gaining an advantage in the hiring process. Additionally, these existing platforms do not offer integrated tools like a **resume builder**, which forces users to rely on external solutions, adding unnecessary complexity to their job search process. These platforms limit users' ability to fully optimize their job applications and making the process less efficient by not offering prioritized referral suggestions and a built-in resume-building feature.

So, this project aims to develop an application that guides user to choose the strongest referral based on their target company and position by using recommendation algorithm.

#### 4. Objectives

- 1. Facilitate Resume Building:** It provides a resume builder to help users to create and customize their resumes for different job opportunities.
- 2. Referrals recommendation:** It provides users a list of individuals who can provide referral, according to their target company and job role.
- 3. Improve Success Rates:** It uses recommendation algorithm to find suitable persons to take referral from , increasing the chances of job application success.
- 4. Interview Preparation:** It includes a quiz or MCQ-based module to help users prepare for job interviews by testing their knowledge on common interview topics.

#### 5. Skillset required to solve/address the problem

Technology	Skills
Front-end	Kotlin and XML
Back-end	Node.js, Golang, MongoDB
Web-Scrapping	Web-Crawler, Rest, Json
Algorithm	Python

#### 6. Timeline to achieve the skillset

Start Date of Project Phase -I:	20, Jan'25
End Date of Project Phase -I:	30, April'25
Total No. of Weeks:	15

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#### 7. Description

- **Technology Stack**
  - 1. Frontend:** using **Kotlin** and **XML** to create a smooth and user-friendly interface.
  - 2. Backend:** The backend is built with **Node.js** to handle communication between the app and server. **MongoDB** is used as the database to store all the data.
- **Architecture:**

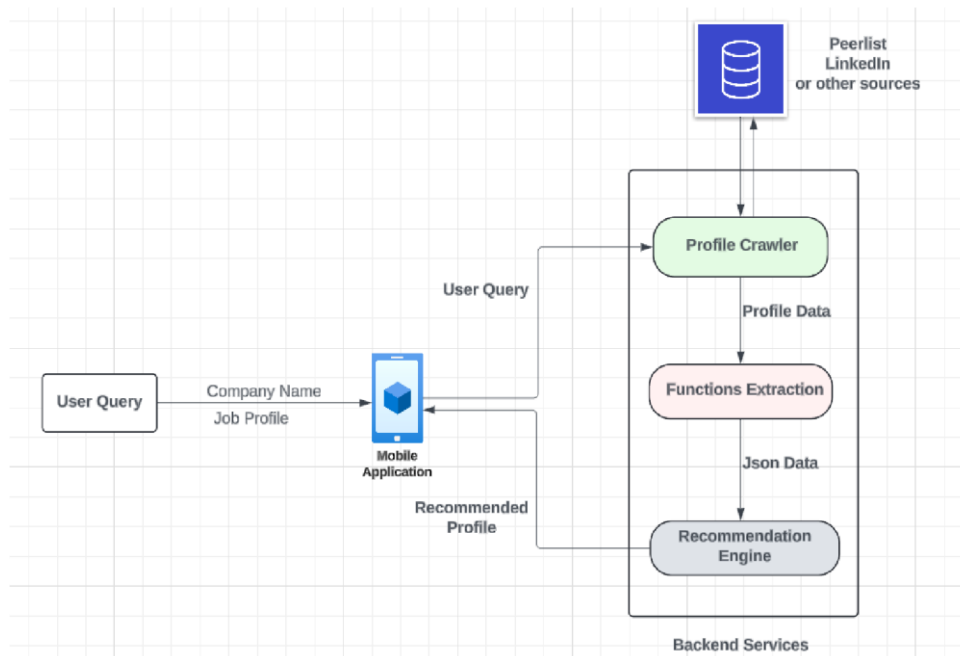
**MVC (Model-View-Controller)** architecture is used to develop this app.

In this setup:

  - **Model:** Manages the data and business logic.
  - **View:** Handles the UI, displaying information to the user and ensuring a good user experience.

- **Controller:** Acts as the intermediary, processing user inputs, making API calls, and updating the Model and View accordingly.
  - **Data Parsing and Recommendation Engine:**  
The backend performs **data parsing** by extracting information from multiple websites such as Peerlist. This data is then processed to build profiles of potential job referees.
- The **recommendation engine** is the core feature of the app, employing algorithms that consider multiple parameters, including:
- **Alumni connections:** Recommends referees who share educational backgrounds with the user.
  - **Professional experience:** Weighs in the years of experience and expertise of potential referees.
  - **Position in the company:** Prioritizes referees holding senior or relevant positions.
  - **Skills match:** Suggests referees based on overlapping skillsets with the user's profile.
- **Resume Building Feature:**  
Allows users to create professional resumes directly within the application. Users can input their details, select templates, and auto-populate fields based on existing data in their profile.

## 8. Block schematic



**Fig 8.1 : Block Schematic**

## 9. Weekly milestones –

Date	Week	Objectives
20-1-25	1	Project Phase Plan Submission
27-1-25	2	Initial Research and Requirement Gathering
03-2-25	3	Finalize System Design and Architecture
10-2-25	4	User Interface Development
17-2-25	5	Company & Employee's Data parsing
24-02-25	6	Review-I
3-3-25	7	Review-I and Feedback Implementation
10-3-25	8	Company & Employee's Data parsing
17-3-25	9	Company & Employee's Data parsing
24-3-25	10	Recommendation Algorithm Building
31-3-25	11	Recommendation Algorithm Building
7-3-25	12	Review-II
14-4-25	13	Review-II and Feedback Implementation
21-4-25	14	Backend Integration & Report Submission
28-4-25	15	First draft return to students and submission of revised report

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## 10. Completed Milestones –

Date	Week	Objectives
20-01-25	1	Project Phase Plan Submission
27-01-25	2	Initial Research and Requirement Gathering
03-02-25	3	User Interface Development
10-02-25	4	User Interface Development
17-02-25	5	Company & Employee's Data parsing
24-02-25	6	Company & Employee's Data parsing

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## 11. Milestones to be Completed –

03-3-25	7	Recommendation Algorithm Building
10-3-25	8	Recommendation Algorithm Building
17-3-25	9	Recommendation Algorithm Building

24-3-25	10	Integration with Application
31-3-25	11	Submission of Revised Report
07-4-25	12	Review - II
14-4-25	13	Review-II and Feedback Implementation
21-4-25	14	Backend Integration
28-4-25	15	Backend Integration & Report Submission

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## 12. Expected Challenges -

- **User Adoption and Engagement:** Ensuring that users adopt the platform and remain actively engaged can be challenging. The platform must offer clear value and an good user experience to attract and retain users.
- **Integration Complexity:** Integrating various components such as frontend interfaces, backend APIs, and third-party services may present technical challenges, requiring careful coordination and testing.
- **Security and Data Privacy:** Safeguarding sensitive user information is critical. Implementing and maintaining high-security standards and compliance with data protection regulations will be a significant challenge.
- **Scalability Issues:** As the platform grows, it must handle increasing data and user interactions efficiently.

## 13. References -

1. *Android Official Website*. Available at: [https://www.android.com/intl/en\\_in/](https://www.android.com/intl/en_in/)
2. *Node.js Official Site*. Available at: <https://nodejs.org/>
3. *Stack Overflow Community*. Available at: <https://stackoverflow.com/>

Name and Signature of Student

Name and Signature of Supervisor