

# "Campus2Corp: A Comprehensive Platform for Engineering Student Career Readiness Using Flutter and Spring Boot"

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## Abstract:

The increasing competition in the job market has made campus placements more challenging for engineering students in recent years. While academic knowledge forms a foundation, it is insufficient to meet industry expectations. Students often face difficulties, such as a lack of proper guidance, limited access to mentorship, and inadequate preparatory resources. This study presents Campus2Corp, a comprehensive mobile-based platform designed to support students in placement preparation through structured career guidance, alumni mentorship, and job tracking mechanisms. The system was developed using Flutter for cross-platform front-end development and Spring Boot for backend services, ensuring scalability, flexibility, and efficient performance. The platform enables students to create professional profiles, access personalized learning paths, connect with alumni mentors, and track their job applications in real time. The proposed solution aims to bridge the gap between academic learning and industry requirements, thereby improving employability and placement success rates of students.

**Keywords:** Placement Preparation, Career Guidance, Alumni Mentorship, Flutter, Spring Boot, Skill Development.

## 1. INTRODUCTION

In the modern era of technology-driven industries, the expectations of engineering graduates have significantly increased. Organizations seek candidates who possess not only academic knowledge but also practical skills, problem-solving abilities, and industry awareness. However, many students face challenges when transitioning from academic environments to professional careers.

One major issue is the lack of structured guidance during placement preparation. Students often rely on scattered resources, such as online tutorials, peer advice, and limited college training programs. These approaches are not always effective because they do not provide personalized guidance based on individual strengths and career goals.

Additionally, students have limited access to experienced professionals who can guide them on interview processes, company expectations, and career pathways. This results in confusion, lack of confidence, and inefficient preparatory strategies.

To address these challenges, a smart system named Campus2Corp was proposed. This platform integrates multiple placement-related functions into a single application. It provides career guidance, mentorship, job tracking, and skill development resources, thereby offering a holistic solution for preparing for placement. The application was developed using Flutter to create a responsive and user-friendly interface and Spring Boot to build a robust backend system. The integration of these technologies ensures smooth communication between the different components and enhances the overall system performance.

## 2. LITERATURE SURVEY

Several studies have explored the challenges students face in securing employment and the importance of structured placement systems.

Studies on placement data analytics indicate that factors such as academic performance, technical skills,

communication abilities, and internship experience play crucial roles in determining placement success. Machine learning techniques, such as regression analysis and decision trees, have been used to predict placement outcomes and identify key influencing factors.

Research on mentorship systems highlights the importance of guidance from experienced professional. Alumni mentorship programs have proven effective in helping students understand real-world scenarios, prepare for interviews, and make informed career decisions.

Career guidance platforms have been extensively studied. These platforms focus on providing personalized learning paths, goal setting, and progress tracking for students. It has been observed that students who receive structured guidance perform better and exhibit higher confidence during placement processes. However, most existing systems focus on isolated functionalities, such as job listings, online courses, or resume building. There is a lack of integrated platforms that combine all the essential features required for placement preparation.

The proposed system, Campus2Corp, addresses this limitation by integrating mentorship, career guidance, and job tracking into a unified platform, thereby providing a comprehensive solution to the problem.

### **3. PROPOSED SYSTEM**

The Campus2Corp system is a centralized platform that assists students throughout their placement journey. The system focuses on providing a structured approach to career preparation by integrating various modules into the curriculum.

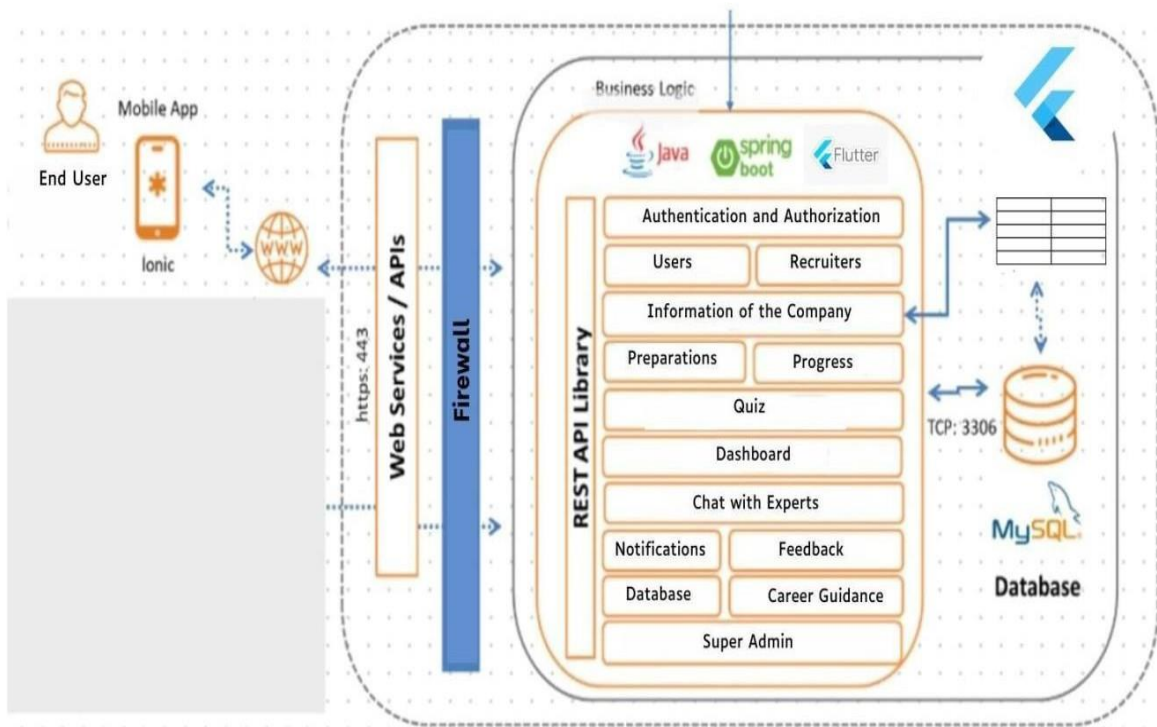
The key features of the system include the following:

- **Student Profile Management:** Allows students to create and maintain professional profiles, including academic details, skills, and career interests.
- **Alumni Mentorship:** Enables students to connect with alumni who provide guidance and share industry insights.
- **Job and Company Management:** Provides information about job opportunities and company requirements.
- **Application Tracking:** Enables students to track the status of their job applications.
- **Skill Development Guidance:** Offers recommendations for improving skills based on career goals.

The system ensures that students receive continuous support and guidance, which improves their readiness for placement.

## 4. SYSTEM ARCHITECTURE

Figure 1: System Architecture



### **Explanation:**

The system follows a three-tier architecture.

- The frontend layer was developed using Flutter, providing an interactive user interface.
- The backend layer is implemented using Spring Boot, which handles the business logic and API communication.
- The database layer uses MySQL to securely store and manage data.

This architecture ensures scalability, modularity, and efficient data management.

## 5. METHODOLOGY

The development of the system follows the Iterative Model, which allows continuous improvement through repeated cycles. The methodology includes the following stages.

- Requirement Analysis – Identifying system requirements and user needs
- System Design – Creating architecture, UML diagrams, and database design
- Implementation – Developing frontend and backend modules
- Testing – Performing unit testing, integration testing, and user acceptance testing.
- Deployment – Launching the system for user interaction.

This approach ensures flexibility and allows for modifications based on feedback.

## 6. MODULES OF THE SYSTEM

### 6.1 User Authentication Module

This module manages user registration, logins, and authentication. This ensures secure access to the system using credential validation.

### 6.2 Student Module

Students can create profiles, update their academic details, and track their career progression. The module also provides personalized recommendations.

### 6.3 Alumni Module

Alumni can register and mentor students. They can share insights into the interview process and industry requirements.

### 6.4 Job Management Module

This module allows administrators to post job opportunities and manage company information.

### 6.5 Application Tracking Module

Students can apply for jobs and monitor their application status in real time.

### 6.6 Notification Module

The system sends notifications regarding job postings, application updates, and important announcements.

## 7. DATA FLOW DIAGRAM

A data-flow diagram (DFD) is a way of representing a flow of a data of a process or a system (usually an information system). The DFD also provides information about the outputs and inputs of each entity and the process itself.



Figure 2: DFD Level 0

In level-1 DFD, context diagram is decomposed into multiple bubbles/processes.

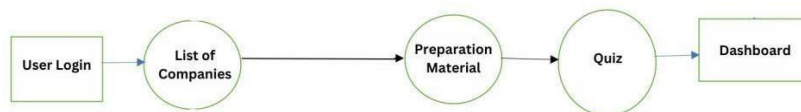


Figure 3: DFD Level 1

## 8. RESULTS AND DISCUSSION

The system was tested to evaluate its functionality and performance. The results indicate that:

- The user interface is intuitive and easy to navigate
- The system efficiently handles data processing and storage
- The mentorship feature enhances understanding of industry expectations

Students using the system showed improved confidence and better preparation strategies for placements.

## 9. FUTURE SCOPE

The system can be further enhanced by:

- Integrating AI-based career recommendations
- Adding resume analysis tools
- Implementing mock interview systems
- Providing chatbot-based assistance

## 10. CONCLUSION

Campus2Corp successfully provides a structured and integrated solution for placement preparation. By combining career guidance, mentorship, and job tracking, the system bridges the gap between academic learning and industry requirements. It helps students develop necessary skills, gain confidence, and improve their chances of securing employment.

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