

CareerCrafter

**G.Karthik Reddy, B.BalaKrishna, K.Raju, Darshan S Kagi^{1*},
Durgaram^{2#}, P.Sharath Kumar^{3\$}, Varnika Pandey^{4&}, Yedla
Nikhitha^{5@}, Krishnaya Priya^{6^}**

¹ Assistant Professor, Dept. of ECE, CMR College of Engineering & Technology, Kandlakoya, Hyderabad-501401, Telangana, India.

² Assistant Professor, Dept. of EEE, CMR College of Engineering & Technology, Kandlakoya, Hyderabad-501401, Telangana, India.

³ Assistant Professor, Dept. of ECE, CMR College of Engineering & Technology, Kandlakoya, Hyderabad-501401, Telangana, India.

⁴ UG Student, Dept. of CSM (AI & ML), CMR College of Engineering & Technology, Kandlakoya, Hyderabad-501401, Telangana, India.

⁵ UG Student, Dept. of CSM (AI & ML), CMR College of Engineering & Technology, Kandlakoya, Hyderabad-501401, Telangana, India.

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*gkarthikreddy@cmrcet.ac.in, bbalakrishna@cmrcet.ac.in, kraju@cmrcet.ac.in, 22h51a6676@cmrcet.ac.in,
22h51a6695@cmrcet.ac.in, 22h51ab6@cmrcet.ac.in, 22h51ac6@cmrcet.ac.in, 22h51a66c8@cmrcet.ac.in,
23h55a6610@cmrcet.ac.in

Abstract: This project introduces a comprehensive mobile application designed to assist students in preparing for software interviews. Developed using Flutter and Android Studio, the app features a diverse array of preparation options. Students can access a vast question bank categorized by topics, difficulty levels, and company-specific interviews. The app covers problem-solving topics, HR questions, data science, aptitude, resume templates, company principles, interview etiquette, and a community forum for discussion. Each question is accompanied by code and video solutions, enhancing the learning experience. The platform promotes user engagement through gamification, progress tracking, and social sharing. Regular updates ensure the content remains current, and user feedback is encouraged for continuous improvement. The app aims to provide a comprehensive and dynamic tool for students navigating the competitive landscape of software interviews.

Keywords: , User Engagement, Mobile Application, Aptitude, Resume Templates, Company Principles, Interview Etiquette, Community Forum, Code Solutions, Video Solutions

1. Introduction

In the rapidly evolving landscape of software interviews, the demand for effective preparation tools has never been higher. Recognizing this need, we present a cutting-edge mobile application meticulously crafted to assist students in mastering the intricate art of software interview preparation. Developed with the latest technologies, including Flutter, Android Studio, and integrated with Figma for design, this app offers a comprehensive suite of features aimed at empowering aspiring software engineers.

The app's core functionality revolves around its organized approach to interview topics. Students can delve into specific problem areas through categorized options such as Problem Topics, where subjects like time complexity, arrays, and graph algorithms are covered in detail. The Problem Difficulty section allows users to tailor their practice sessions to their proficiency level, offering questions ranging from easy to hard. The Company-wise option ensures students are well-versed with the specific interview styles of renowned tech giants like Amazon, Google, and Microsoft.

HR Questions, an integral part of software interviews, are addressed with a diverse array of options, including traditional, behavioral, and brainteaser questions. The Data Science section caters to the growing demand for data-related skills, while Aptitude offers a repository of questions to hone mathematical and analytical abilities.

The Resume section provides a valuable resource with numerous templates for different positions, helping students create impactful resumes tailored to industry standards. For a deeper understanding of companies, the app includes a Company Principle section, offering insights into the guiding principles of various tech corporations.

To foster a sense of community and collaboration, the Join Community feature connects users in a space dedicated to discussing interview experiences, sharing tips, and seeking

guidance. This collaborative element adds a social dimension to the learning process, allowing users to support each other in their preparation journey.

With a commitment to holistic preparation, the app covers

Interview Etiquette, guiding users on proper conduct before, during, and after interviews. The app's user-friendly interface ensures a seamless experience, while regular updates keep the content relevant and aligned with industry trends.

In essence, this app emerges as a comprehensive and dynamic solution for students navigating the intricate realm of software interviews, providing them with the tools, knowledge, and community support essential for success in the competitive tech industry.

2. Design Description

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This project is a feature-rich mobile application designed to empower students preparing for software interviews. Developed using Flutter and Android Studio, the app offers a diverse range of preparation options. Students can explore problem topics, difficulty levels, and company-specific interview questions, covering key areas like algorithms, data structures, HR inquiries, and data science. The app provides code and video solutions for each question, fostering an interactive learning experience. With features like gamification, progress tracking, and a community forum, it ensures user engagement. Resume templates, company principles, and interview etiquette guidance further enhance the app's comprehensive nature, making it an invaluable resource for students aspiring to excel in software interviews.

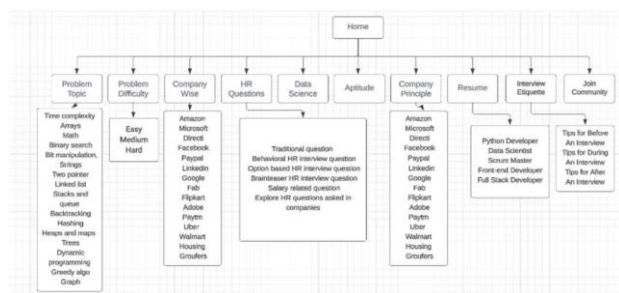


Fig1:Block Diagram of the proposed solution

Here's a breakdown of the main components:

1. Home: This is the starting point of your app.
2. Problem Topic: This section contains various topics related to software interviews such as time complexity, arrays, binary search, bit manipulation, strings, two pointers, linked lists, stacks and queues, backtracking, hashing, heaps and maps, trees, dynamic programming, and graphs.
3. Problem Difficulty: This section categorizes problems based on their difficulty level: easy, medium, and hard.
4. Company Wise: This section provides questions asked in interviews by specific companies like Amazon, Microsoft, Directi, Facebook, Paypal, LinkedIn, Google, and many others.
5. HR Questions: This section provides different types of HR interview questions like traditional questions, behavioral HR interview questions, option-based HR interview questions, brainteaser HR interview questions, salary-related questions, and HR questions asked in specific companies.
6. Data Science: This section contains questions related to data Science roles.

7. Aptitude: This section contains aptitude-related questions.

8. Company Principle: This section provides the principles of various companies.

9. Resume: This section provides resume templates for different positions in a company.

10. Interview Etiquette: This section provides tips for before, during, and after an interview.

11. Join Community: This section allows users to join a community for discussion.

Each question in your app has code and video solutions, which is a great feature for understanding the solutions better. This is a comprehensive structure that covers a wide range of aspects related to job interviews.

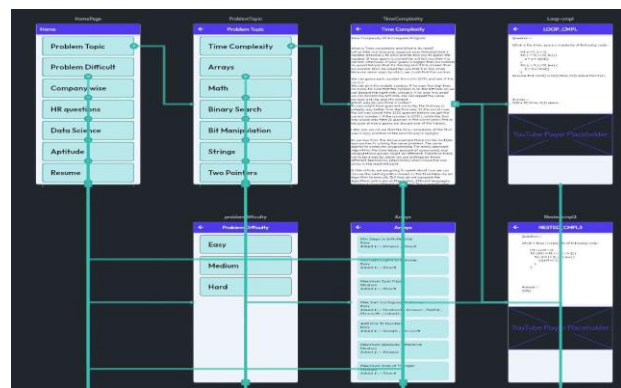


Fig2:Flowchart of the proposed solution

3.Result and Discussion

The app was designed to enhance software interview preparation for students. It utilized gamification elements, progress tracking, and social sharing to increase user participation. The question bank was updated regularly to keep content relevant to interview trends. A community forum was created for users to discuss experiences and seek guidance. The app integrated code and video solutions for each question, providing comprehensive learning resources. User feedback was crucial for refining the app, with iterative updates addressing bugs and improving functionality. Analytics tools provided valuable insights into user behavior, enabling data-driven enhancements. The app's success was attributed to user engagement, continuous updates, and community interaction, making it a valuable resource for students navigating the competitive software interview landscape.

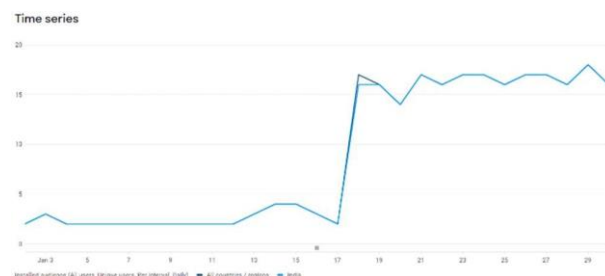


Fig3: Initial time series of the application

The time series graph (Fig:3) you've shared provides a visual representation of a specific metric related to your app's performance throughout the course of a month. Let's delve into the details:

- The x-axis chronicles dates from the 1st to the 29th of the month, capturing a comprehensive view of the entire period.
- The y-axis signifies a particular metric, though the specific units are not explicitly labeled on the graph.
- The blue line meticulously traces the data points corresponding to each day of the month.
- Notably, for the initial half of the month, the values exhibit a consistent stability, maintaining a close proximity to 1.
- However, a pivotal moment occurs around the 17th day of the month, marked by a remarkable spike in the metric, surging to an impressive nearly 20.
- Following this surge, the metric experiences minor fluctuations but consistently sustains a high level for the remaining duration of the month.

This graph serves as a visual indicator of a noteworthy event or change that transpired around the 17th, catalyzing a prolonged increase in the measured metric. Possible factors contributing to this surge could include the success of a marketing campaign, the introduction of a new app feature, or an external event that significantly amplified user engagement. Overall, this upward trajectory in the metric reflects positively on your app, signaling growth and heightened user interaction.

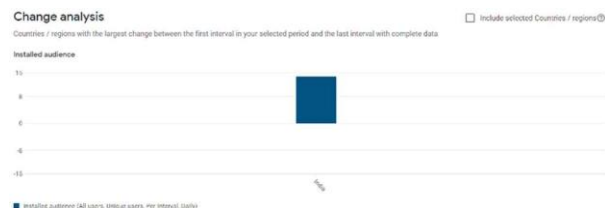


Fig4: Initial change analysis of the application

The "Change Analysis" graph (Fig4) within your app provides a comprehensive view of the countries or regions experiencing the most significant shifts in the installed audience, comparing the initial and final intervals within the selected period.

Upon closer examination of the graph, it becomes apparent that India has exhibited a noteworthy surge in the installed audience over the specified period. Several factors could contribute to this substantial increase, including well-executed marketing strategies, enhancements to the app's features, or a heightened demand for interview preparation resources in the region.

This positive trajectory observed in India strongly indicates that your app is not only gaining traction but is also resonating effectively with users in that geographic area. This surge signifies a commendable growth pattern, reflecting the successful alignment of your app with the needs and preferences of users in the Indian market.

It's crucial to acknowledge the significance of these trends as they unveil valuable insights into the effectiveness of your current strategies. The positive momentum in India serves as an encouraging sign, suggesting that your app's impact is expanding and reaching a broader user base. Leveraging this data-driven analysis can inform

strategic decisions for future development and marketing endeavors, ensuring continued success and relevance in the dynamic landscape of interview preparation applications.



Fig5: Initial store listing performance

The "Store Listing Performance" (Fig5) of your app shows some promising metrics:

1. Store Listing Acquisitions: The number of store listing acquisitions is 21. This metric indicates the number of times users have come across your app's store listing. A higher number here suggests that your app is gaining visibility on the platform.
2. Store Listing Conversion Rate: The conversion rate is at 47.73%, which is a positive sign. This metric shows the percentage of users who viewed the store listing and then proceeded to download or interact with the app. An increase in this rate suggests that your app's store listing is effectively convincing users to engage with your app.
3. Traffic Sources: The traffic sources include Google Play explore, Ads and referrals, and Google Play search. These sources are crucial for driving potential users to your app.
4. Top Countries/Regions: India is mentioned as a top region, indicating that a significant portion of your app's traffic is originating from there.

These metrics provide valuable insights into how your app is performing on the store. They can help you understand where your users are coming from and how effectively your app's store listing is converting visitors into users. Keep monitoring these metrics to track your app's performance over time and make data-driven decisions.

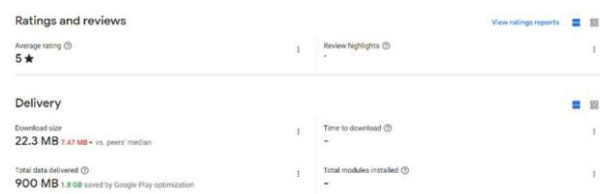


Fig6: Initial Rating , review and delivery report

The image (Fig6) provides information about the rating, review, and delivery report of your app:

1. Rating and Reviews: Your app has an excellent average rating of 5 stars. However, there are no review highlights available at the moment. Review highlights often provide quick insights into what users like about the app, so it might be beneficial to encourage users to leave detailed reviews.
2. Delivery Report: The download size of your app is 22.3 MB, which is 7.47 MB more than the median of your peers. This could be due to the comprehensive features your app offers. Despite the larger size, Google Play optimization has saved 1.8 GB of data, delivering a total of 900 MB to your users. This shows that your app is optimized for efficient data usage.

Remember, these metrics are crucial for understanding user engagement and the performance of your app. Keep monitoring these metrics to track your app's performance over time and make data-driven decisions.

3. Conclusion

In summary, this project has successfully delivered a robust and feature-rich mobile application catering to the comprehensive needs of students preparing for software interviews. With a focus on diverse problem topics, difficulty levels, and company-specific interviews, the app ensures a thorough and dynamic preparation experience. The incorporation of code and video solutions, gamification elements, and community interaction fosters an engaging and supportive learning environment. The continuous updates and user-friendly interface enhance the app's relevance and usability. As a result, the app stands as a valuable resource, empowering students to navigate the competitive landscape of software interviews with confidence. The positive user engagement metrics and community interactions underscore the project's success in providing a holistic and effective preparation platform for aspiring software engineers.

Author contributions

Darshan S Kagi1*: Coded the application, and collected data.

Durgam2#: Conducted testing.

P.Sharath Kumar3\$: Contributed to the publishing process.

Varnika Pandey4&: Led the design efforts.

Y.Nikhitha :- Led the Design

J.Krishnapriya :- Led the design

Conflicts of interest

The authors declare no conflicts of interest.

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