Placement Readiness Prediction System

Mrs. T.Swathi[1], A. Deepika[2], B. Tejeshwari[3], Archana Devi[4], R. Vignesh Goud[5]

[1]Department of CSE(Data Science), ACE Engineering College, India
[2,3,4,5] Department of CSE(Data Science), ACE Engineering College, India

Corresponding Author Email: swathiturai12@gmail.com

How to Cite this Article:

T.Swathi, , Deepika, A., Tejeshwari, B., Devi, A. & Goud, R. V. (2026). Placement Readiness Prediction System. International Journal of Creative and Open Research in Engineering and Management, 02(04). https://doi.org/10.55041/ijcope.v2i4.196

https://doi.org/10.55041/ijcope.v2i4.196

Abstract—

Getting a job on campus is a deal for students because it can make or break their future career.. A lot of students start getting ready for these campus placements without really knowing how ready they are for campus placements.

They usually just focus on getting grades or practicing coding and forget about other important things like having the right technical skills for campus placements working on projects doing internships getting certified being able to communicate well and having a strong overall profile for campus placements.

This means that after putting in a lot of time and effort to prepare for campus placements students can still struggle when its time to apply for jobs on campus.

They might not realize how important it is to have a balance of all these different skills and experiences for campus placements.

If students do not take the time to really think about their strengths and weaknesses for campus placements they might find it tough to succeed in the recruitment process for campus placements.

It is not about being book-smart or good at coding. It is about being well-rounded and having a lot to offer for campus placements.

By taking a look at their own abilities and experiences for campus placements students can get a better sense of what they need to work on to be truly ready for campus placements.

To address this issue this paper presents a Placement Readiness Prediction System for campus placements, which is designed to help students evaluate their placement preparedness for campus placements in a structured and practical way.

The proposed system collects student profile information such as CGPA, technical skills for campus placements, completed projects, internship experience, certifications and communication responses.

Based on these inputs the system analyzes the student profile for campus placements. Generates outputs such as placement readiness score for campus placements profile strength, missing skill identification for campus placements, communication assessment and improvement recommendations for campus placements.

Our Placement Readiness Prediction System for campus placements is built using Python and Flask which handles the behind-the-scenes work and HTML, CSS and JavaScript which make the user experience smooth and interactive for campus placements.

We also use some tools like Pandas to manage and analyze data for campus placements.

The goal of our Placement Readiness Prediction System for campus placements is not just to predict how ready students are for placement but to help them improve by pointing out areas where they need to focus for a better career ahead in campus plcement

I. INTRODUCTION

Getting a job on campus has become really tough lately. Students need to do in their studies and also ace technical interviews coding tests and exams. They have to do in group talks and meetings with the HR team too. This makes getting ready for a job a lot than it used to be.

Usually many students prepare for a job without knowing what they're good or bad at. Some students may have marks but can't communicate well. Some may know how to program but don't have projects or internships. Others may have certifications. Don't know which job is best for them.

As a result students often prepare in a way instead of following a proper plan. A common problem is that there's no system that can tell a student if they're ready for a job or not. Existing platforms may help students learn coding or improve their resumes. They usually don't provide a complete analysis.

Students need a system that can combine all job-related factors and give them clear feedback. The Placement Readiness Prediction System is developed to address this issue.

This system checks student profile details such as academic performance, technical skills and project work. It also looks at internship experience, certifications and communication ability. Based on this information it predicts job readiness. Gives suggestions for improvement.

By doing students can make informed decisions about their future and get ready for the job market, with confidence. The major goals of this system are:

* To identify profile strengths and weaknesses

* To detect skills and gaps

* To provide recommendations

* To support career and job preparation

This project is useful because it helps students prepare more clearly and more effectively instead of depending only on assumptions.

II. LITERATURE REVIEW

Online learning platforms have become a part of how students prepare nowadays.

* They offer courses in areas like programming, web development and data science.

* These platforms help students learn things and get skills that are important for jobs.

However most platforms focus on teaching and giving support. They do not really check if a student is ready for a job.

Many students use coding practice platforms to get better at programming and solving problems.

* These platforms are super helpful for getting ready for interviews.

* They let students practice coding questions and think logically.

They are especially useful for coding rounds that companies use to test people.

*. These platforms do not think about other important things like communication skills, internship experience, project quality and grades.

Students can get better at programming and problem-solving. They also need to work on other skills to be successful.

* Job portals and online recruitment platforms help students find jobs upload resumes and apply for roles.

* These systems connect students with companies. Help them understand what jobs require.

They also help students know what skills companies are looking for.

*. They do not usually check if a students profile is strong enough before they apply.

When it comes to getting ready for a job students can really benefit from using resume-building and profile-based platforms.

* These tools help students make a resume and show off their technical skills.

Having a resume is important for doing well in a job search.

*. These systems mainly focus on making things look good rather than checking if the student is really ready.

Students need to make sure they have the skills and knowledge to back up their resume.

* Career guidance systems help students find job roles that fit their interests, skills and education.

These systems guide students toward roles like software developer or data analyst.

*. Many of them do not include detailed checks or recommendations.

Skill gap analysis systems have become useful in student support applications.

* They help identify the difference between the skills a student has and the skills companies want.

They show missing areas and guide students on what to learn next.

*. Most of these systems mainly focus on technical skills.

Communication and grammar checking tools are useful for improving written communication.

* They help students improve grammar, sentence formation, clarity and written expression.

Good communication is essential during interviews and professional interactions.

*. These systems usually work independently.

Now students get help in lots of different areas like learning, coding talking to others and getting career advice.

* But there's still a gap. We need a system that looks at everything and figures out if a student is really ready to start their career.

That's why we created the Placement Readiness Prediction System.

* It puts all the stuff like grades, tech skills, projects, internships, certifications and communication skills into one place.

This system gives students the possible guidance, on getting a job.

III. METHODOLOGY

The Placement Readiness Prediction System helps students understand their job readiness by checking things about them.

The goal is to make it simple and practical so it can check if a student is ready for a job and give advice on how to improve.

To start students enter their details on a website.

This includes:

* How well they are doing in school

* Any special skills they have

* Projects they have done

* Internships they have done

* certificates they have earned

They also answer questions to show how well they can communicate in writing.

All this information is important because companies look at these things when hiring.

Now that we have all the information we need to prepare it for analysis.

This is called data preprocessing.

We check that all details are correct and organized properly.

The system makes sure all necessary fields are filled removes information and puts everything in a format that easy to work with.

This step is crucial because accurate input gives results.

The key to our approach is the placement readiness analysis.

We look closely at each students profile considering:

* Their academic record

* Technical skills

* Projects they've worked on

* Internships

* Certifications

* How well they communicate

We use a scoring system to see how ready a student is for a job.

By looking at their profile strength we can tell if a student is ready for a job or needs to improve.

When a students readiness score is calculated the system looks for gaps in their skills. Suggests ways to improve.

This helps figure out what the student is missing like project experience or technical skills.

The system uses this information to provide recommendations.

The final stage includes communication analysis and result generation.

The system evaluates the student's written responses to identify grammar and clarity issues.

After completing all stages the system displays:

* Placement readiness score

* Profile strength

* Missing skills

* Communication performance

* Recommendations

This complete methodology makes the system useful not for prediction but also for practical student guidance.

The Placement Readiness Prediction System helps students get ready for the hiring process. Makes it more likely that they'll get a good job.

The system provides guidance for improvement.

Students can use the Placement Readiness Prediction System to understand their job readiness.

The Placement Readiness Prediction System is a tool, for student

IV. RESULTS AND DISCUSSION

The Placement Readiness Prediction System is a tool that helps students figure out how ready they are for placement and where they need to work on. We tried out the system with student profiles to see if it could really tell the difference between students who are more or less prepared.

A. Student Input Interface

This is where you enter the information that will be used for all the other parts of the Placement Readiness Prediction System process.

(Figure 1: Student Input Interfac

(Figure 1)

B. Placement Readiness Prediction Output

When you submit your profile the Placement Readiness Prediction System works out a score to show how ready you are for placement and it gives you this score as a percentage. Along with your score you also get to see:

* Placement Probability

* Profile Strength

* Skill Gap Indicator

* Relevant Skills

* Missing Skills

This information shows users how ready they are and how good their profile is now.

For example let us look at a sample Placement Readiness Output.

Table I: Sample Placement Readiness Output Parameter

Output

* Placement Probability: 78%

* Profile Strength: 74%

* Skill Gap: Moderate

* Status: Good Readiness

The Placement Readiness Prediction System output is useful because it converts scattered profile information into an understandable readiness estimate

(Figure 2)

(Figure 2: Placement Prediction Report)

C. Skill Gap and Recommendation Analysis

Then it gives you personalized ideas to make them better. This screen does not just show you a score it actually tells you what to do to get better.

For example if a student has academic performance but weak practical exposure the Placement Readiness Prediction System may recommend:

* Completing one internship

* Building project work

* Learning role- technical skills

* Earning domain certifications

This design is more useful because it gives recommendations, not evaluations making it better for real-world use.

Let us look at a sample Recommendation Output.

Table II: Example Recommendation Output

Input

* Good CGPA, projects: Build real-time project portfolio

*Basic skills only: Learn technical tools

* No internships: Complete least one internship

* Weak communication: Practice structured written responses

(Figure 3: Skill Gap Analyzer and Recommendation Screen)

(Figure 3)

D. Communication Skill Evaluation

A dedicated communication module was tested to evaluate how well the Placement Readiness Prediction System can assess written communication quality. Students are asked to answer communication-related prompts after which the Placement Readiness Prediction System checks grammar and sentence quality and provides:

* Communication Score

* Mistake Count

* Improvement Suggestions

* Corrected feedback

This module is really useful because how well you communicate can make or break an interview.

Let us look at a sample Communication Analysis Output.

Table III: Sample Communication Analysis Output

Metric

* Output

* Communication Score: 72%

* Grammar Issues: 5

* Clarity Rating: Moderate

* Suggested Improvement: Improve sentence structure and fluency

(Figure 4: Communication Skill Report)

E. Career Role Suggestion Output

The Placement Readiness Prediction Systems last big output is guidance based on roles. It looks at the students profile and how ready they are then suggests career paths that fit them like:

* Software Developer

* Data Analyst

* Web Developer

* Python Developer

* Entry-Level Technical Associate

This information is really useful for students as they often study without a clear idea of which jobs are a good fit for the skills they have right now.

(Figure 5: Recommended Career Role Output)

F. Experimental Observation

We tried out the Placement Readiness Prediction System with a bunch of sample profiles and here are a couple of examples that show what we found.

Table IV: Test Case Comparison

Test Case

* Input Summary

* Placement Score

* Interpretation

* Case 1: CGPA 8.2, Python, SQL, 1 Internship: 78%: readiness

* Case 2: CGPA 6.5 Basic Programming, No Internship: 55%: Needs improvement

The results show that the Placement Readiness Prediction System works as expected when it comes to the quality of profiles. Profiles that are stronger get scores and more detailed suggestions while profiles that are weaker get guidance on how to improve.

The results show that the Placement Readiness Prediction System we have proposed does not just categorize students it actually helps them by providing analysis they can understand and guidance they can act on. The Placement Readiness Prediction System is a tool for students to figure out how ready they are, for placement and where they need to work on.

V. CONCLUSION

This study introduces a system to help students get ready for job placements. The system is a tool that looks at many different things about the students like how well they do in school the skills they have the projects they have worked on, internships, certifications and how well they communicate with others. What is unique about this system is that it brings all these parts together to give a complete picture of whether a student is ready for a job rather

than just looking at one or two things about the student.

The system is really helpful because it gives students a score that shows how ready they are for job placement points out the skills they're missing checks how well they communicate with others and offers suggestions for improvement based on their role. This makes the system a great tool for students who are getting ready to enter a job market. It is not about predicting how the students will do but also about giving them practical advice on how to improve their skills and get better at communicating with others.

By looking at the patterns of the students they can figure out what their students need help with and make their classes more effective for the students.

This way everyone benefits. The students get better prepared for job placement and the schools get to improve their teaching methods. To put it simply this project offers a powerful tool to help students get ready for jobs and meet the expectations of potential employers. The system fills the gap between what students learn in school and what companies expect from them when they apply for a job.

Future Scope

The current system can be extended in meaningful directions to improve practical impact and prediction quality of the system. Future enhancements may include:

* Integration with real-world placement datasets for accurate prediction of job placement

* Resume. Automatic resume quality analysis to help students improve their resumes

* AI-based mock interview evaluation to help students prepare for job interviews

* Spoken communication and pronunciation assessment to help students improve their communication skills

* Real-time job portal and recruiter integration to help students find job openings

* Company-specific role preparation guidance to help students prepare for specific jobs

* Adaptive learning path generation based on student weakness patterns to help students focus their studying

These extensions can transform the framework into a more comprehensive student employability intelligence system that helps students get ready, for job placement and meet the expectations of potential employers.

REFERENCES

[1] Pedregosa, F., Varoquaix, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O. And others, "Scikit-learn: Machine Learning in Python " Journal of Machine Learning Research, 2011.

[2] McKinney, W., "Data Structures for Statistical Computing in Python " Proceedings of the Python in Science Conference, 2010.

[3] Hunter, J. D., "Matplotlib: A 2D Graphics Environment " Computing in Science & Engineering 2007.

[4] I recommend checking out this book: Speech and Language Processing by Jurafsky and Martin published by Pearson Education in 2009.

[5] Brownlee, J. wrote a book called Machine Learning Mastery with Python published by Machine Learning Mastery in 2016.

[6] Grus, J. wrote Data Science, from Scratch published by Media in 2019. Also Russell, M. A. wrote a book called Mining the Social Web, published by Media in 2018.