



SMART INDIA  
HACKATHON  
2022



# TEAM TECH MATRIX

**Problem statement:** Prediction of Admission & Jobs in Engineering & Technology /Management/Pharmacy with respect to demographic locations.

**Ps Number: DR728**

**Organization:** All India Council for Technical Education (AICTE).

**Category:** Software

**Domain Bucket:** Smart Education

---

**College Name:** Vidush Somany institute of technology & research

**Mentor name:** Prof.Vimal Bhatt

**Team leader:** Om Patel

# Idea Description

❑ For the problem statement we have three portals:

1. **Student portal:** Students can analysis the institute as well as future admission and job trend through this portal.
2. **Institute portal:** It will be managed by institution and their relevant data will be share to the administrative portal(AICTE).
3. **Administrative portal:** The administrative portal will be managed by AICTE.

❑ In our prediction model we have two type of prediction:

1. **Future Admission prediction:** With the use of institute data we will create a predictor model with the help of machine learning to predict the future admission trend.
2. **Future job prediction:** For the job prediction we will manage to fetch API from linkedIn and similar sites.

## Technology Stack

**Front-End:** Reactjs, redux, Es6(javascript), CSS3,Bootstarp

**Back-end:** Flask rest

**Database:** PostgreSQL

**Data Fetch:** Employment Data from LinkedIn API and Student data from AICTE and state government sites

❑ **Use case:**

- With the basis of requirement job in future AICTE can able to starts new courses and modifying syllabus.
- According to the requirement of jobs AICTE can able to change (ie. increase or decrease) in seats
- student can analysis institute according to its profile.

# Key KPIs(Key Performance Indicator)

## Branch Wise Vacant Seat Trend

It is use to identify the overall vacant seats of specific branch. This trend will help to rectify the root causes and to take necessary corrective actions or to do provisions for refinements.

- Identification of branches having vacant seats
- Infrastructure / faculty related issue
- No job opportunity / future growth

## Admission Trend

It is use to identify the most popular branches among the students. It helps to identify the overall seat metrics and to refine the criteria for course approval and additional seats allocations for institutes.

- Good job market for specific branches / specialized courses
- Good placement scope
- Higher compensations

## Course Wise Staffing Trend

It is use to identify overall staffing metrics for different branches and making some rules for institutes to have skilled staff to fulfil the industry expectations.

- Availability of Skilled staff
- Helps to give guidance to student
- Reputation of institute compared to other peers

## Institute Ranks

It is use to identify the rating of all the institutes based on different criteria. It is really needed to lift the education and infrastructural level one step up to meet the expectations.

- Feedback about teaching quality & infrastructure setup
- Helps to take decision to give approval for additional seats
- Role model for other institutes

## Job & Further Study Trend

It is use to identify the job trend at institute level. It is helpful to dig into the different areas of improvement like Quality of education, Staffing, infrastructure setup, Industry tie up etc.

- Campus selection ratio
- Trainings for student for better preparation for campus recruitment
- Opportunity for further study

## Branch Wise Job Trend

It is use to identify the Job market trend for specific branches. This data points helps to realize the Job market need and do the necessary refinement for better prospects.

- Branches having higher job opportunity
- Rolling out the best practices for other branches
- Improvement in staffing, teaching quality, practical orientation, infrastructure refinement

## Course Wise Job opportunity

It is use to identify the subjects which needs to be included in curriculum to have better job opportunity. It helps AICTE to take decisions for course restructuring.

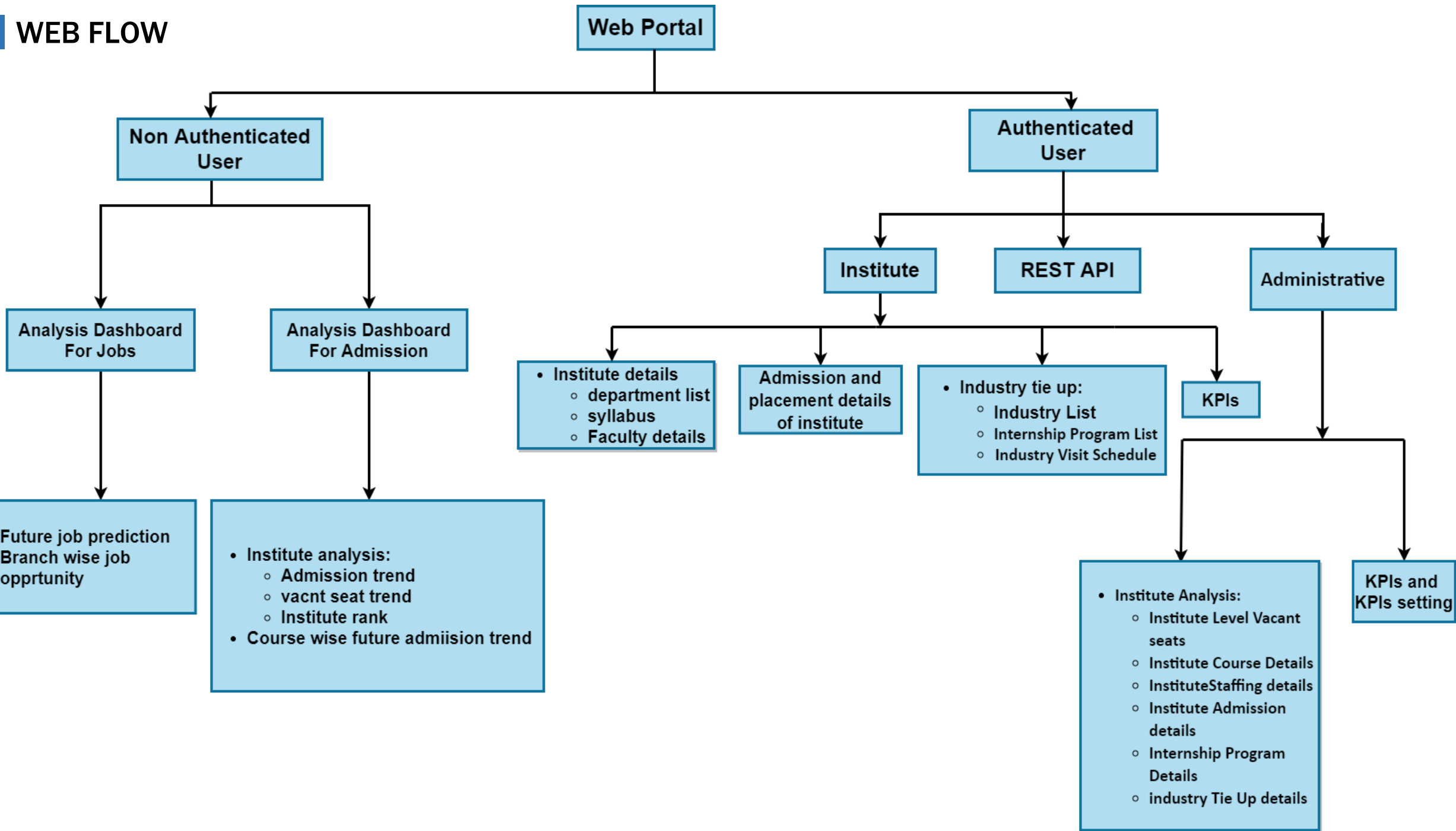
- Courses having higher job opportunity
- Include subjects having good demand in market for job opportunity
- Convert seats of non-performing branches to other branches having good job market

## Industry Vs. institute Tie Up

It is use by government to form some mandatory norms for industry to have tie up with institutes for trainings and internship programs for students.

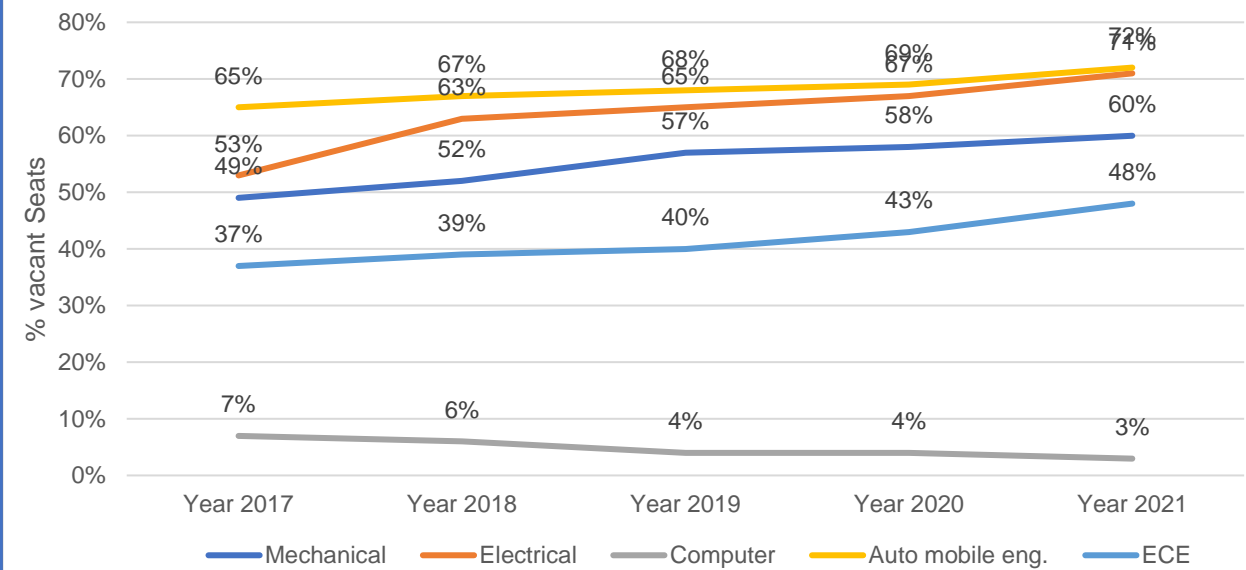
- Form rules for industry to have tie up with education institute
- Onsite training for students during their study. Visit of industry on periodic basis.
- Practical oriented seminars in institute by subject matter expert

# WEB FLOW

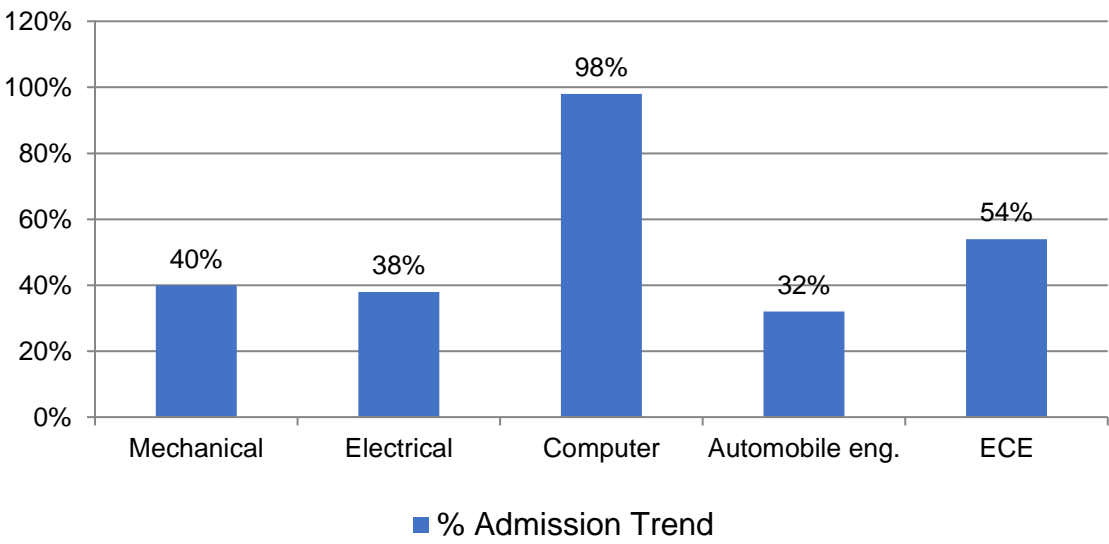


# Administrative Level - Data Analysis

Course Wise Vacant Seat Trend

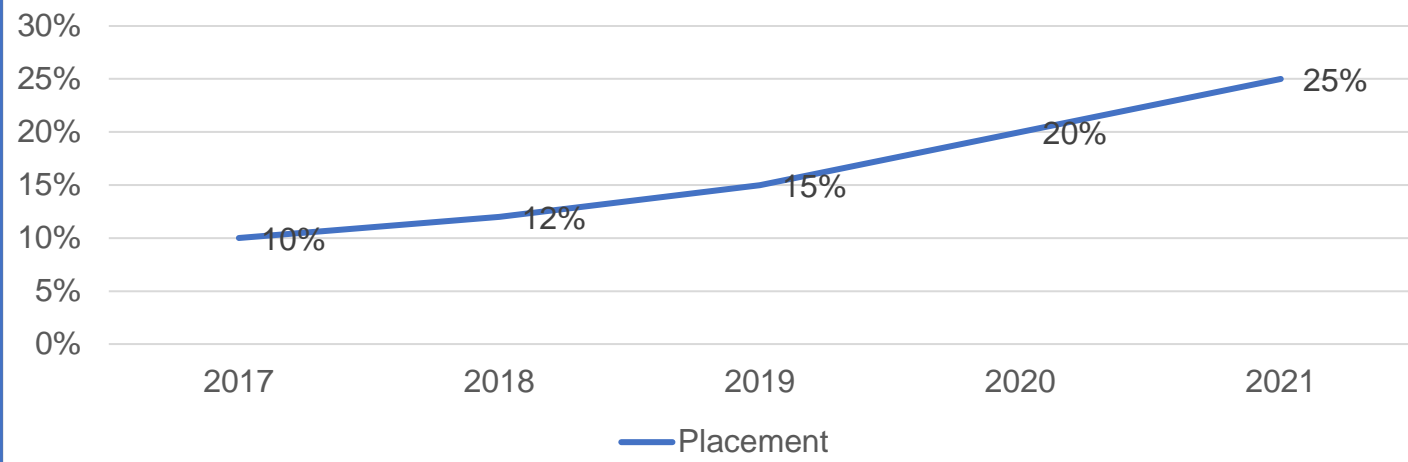


% Admission Trend

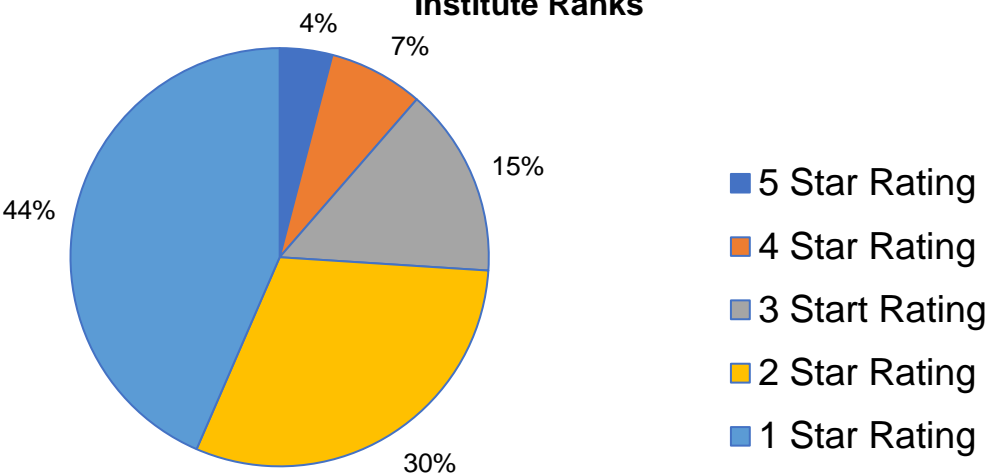


# Institute Level - Data Analysis

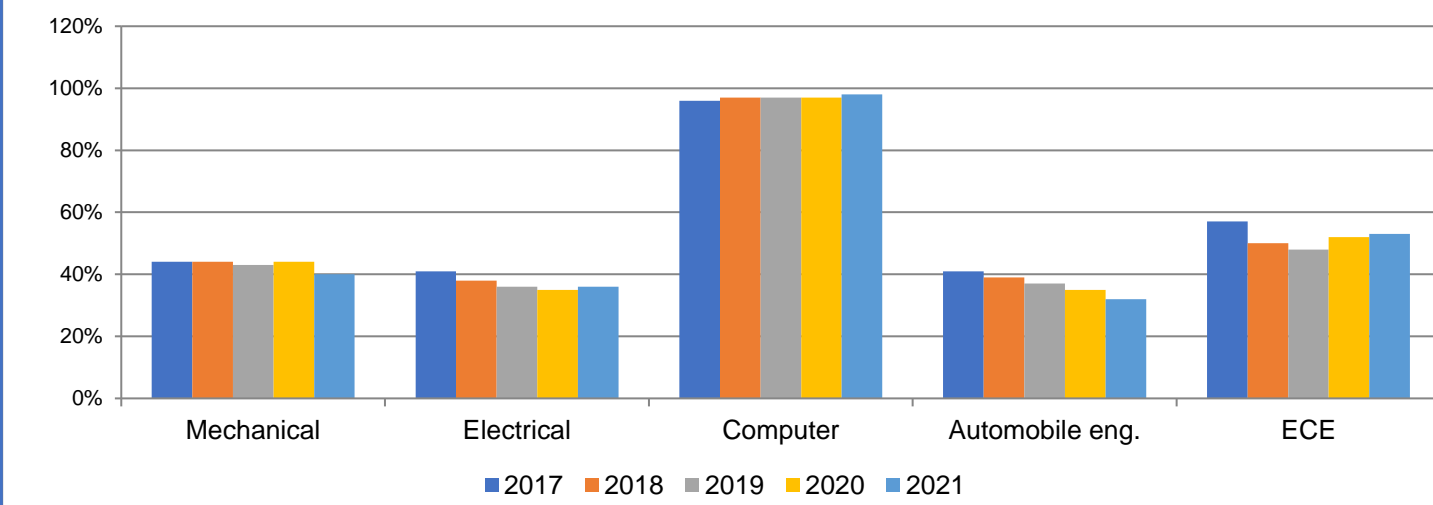
Placement Trend



Institute Ranks



Branch wise Job Trend



INDUSTRY VS INSTITUTE TIE UP DETAILS

