

# Location wise Student Admission Analysis

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**Abstract** --- The educational Institutions of India were primarily imparting arts and science education in last century. At that time, there was no road map for growth of professional education. At present scenario, professional education is growing day by day. There are strengths as well as weaknesses of the Indian technical education system. At present, India is producing huge number of technical manpower. Now, global position is improving. A very promising tool to attain valuable information is the use of data mining. Data mining techniques are used to discover hidden information, patterns and relationships of large amount of data, which is very much helpful in decision making. A single data contains a lot of information.

In this research paper, ten reputed institutes are selected who are running professional courses. Student admission analysis is done on the basis of different locations for the year 2009, 2010 and 2011. The result of analysis proves that students are taking admission from different zones but maximum admissions are taken from north zone.

**Keywords** - Data Mining, Education, Professional Course, Admission Analysis

## I. INTRODUCTION

Education is important for every individual in a nation. It plays a vital role to change the stare of a country. Professional courses have turned out to be a very popular choice in the present times, with student's opting for various courses of their preference. These courses provide a well-defined career in terms of the industry to be pursued like medicine, engineering, management, law, mass media, hospitality etc. Now days, many institutes are providing technical and professional courses in our country. State wise technical education board has been set up to look after the necessity and importance of technical education and to implement it properly. After independence of India, the technical education is given importance in the five year plans [2]. Technical education has to be developed for the economic development of our country. The IITs have earned worldwide fame due to the sincere efforts of faculty, students and administration. The IIT system is one of the major success stories of independent India and ranks amongst the topmost institutions in the world in all ranking system of educational institutions [2]. Self renewing process through continuous assessment of educational facilities and curriculum has proved to be a successful system. The identification of weak points being imperative and

immediate, the article attempts to make some conclusive remarks so that the technical education scenario in India can be improved and India can take a globally relevant seat in the engineering educational institute rankings [1]. Without effort, no one can see success. From different location, persons are putting efforts. Data mining with visualization technique can be used to discover and extract knowledge to proceed in right direction. One of the most useful data mining techniques [5] for analysis is visualization using graph. The prediction of student's interest with location is more beneficial for identifying academic achievements.

The rest of the paper is organized as follows: Section II describes the parameter on which analysis is done. Section III describes the methodology followed in carrying out the research. Section IV describes the key findings and its implications and Section V concludes the paper.

## II. PARAMETER FOR ANALYSIS

**Location wise Admission of students in professional courses**-This parameter shows how many students are taking admission in professional courses from different location.

For data visualization to predict valuable information, analysis is done using graphical tool. Table1 represents the admission of students in different clusters of Zones.

## III. METHODOLOGY

For analysis, ten reputed institutes have been selected from national capital region (NCR Delhi) in India. These organizations are running professional courses. Entire country is divided in different zones viz. Eastern Zone, North Zone, South Zone, West Zone and Central Zone. Eastern zone consists of states viz. Assam, Bihar, Orissa, Sikkim, Jharkhand and West Bengal. North zone consists of states viz. Delhi, UP, Uttaranchal, Jammu, Himachal Pradesh, Haryana, Punjab and Chandigarh. South zone consists of states viz. Karnataka and Andhra Pradesh. West zone consists of states viz. Gujarat and Maharashtra while Central zone consists of states viz. M.P and Chhattisgarh. Students are taking admission from different states. On the basis of these states, zones are categorized. Student admission information is collected for the year 2009, 2010

and 2011. Table 1 is constructed for showing total number of admissions from different states divided in different zones. Table 2 is constructed based on different clusters of zones for admission of students.

|                            | State            | Zone wise admission of students |           |           |
|----------------------------|------------------|---------------------------------|-----------|-----------|
|                            |                  | Year 2009                       | Year 2010 | Year 2011 |
| East Zone<br>(Cluster 1)   | Assam            | 4                               | 2         | 4         |
|                            | Bihar            | 889                             | 856       | 801       |
|                            | Jharkhand        | 252                             | 208       | 259       |
|                            | Orissa           | 41                              | 47        | 71        |
|                            | Sikkim           | 1                               | 0         | 0         |
|                            | West Bengal      | 18                              | 27        | 26        |
| North Zone<br>(cluster2)   | Chandigarh       | 27                              | 10        | 17        |
|                            | Delhi            | 813                             | 918       | 978       |
|                            | Haryana          | 64                              | 57        | 58        |
|                            | Himachal Pradesh | 6                               | 4         | 2         |
|                            | Jammu            | 43                              | 37        | 19        |
|                            | Punjab           | 45                              | 37        | 46        |
|                            | UP               | 2763                            | 2967      | 3036      |
|                            | Uttanchal        | 317                             | 363       | 384       |
| South Zone<br>(cluster3)   | Andhra Pradesh   | 5                               | 4         | 5         |
|                            | Karnatka         | 2                               | 6         | 2         |
| West Zone<br>(cluster4)    | Gujarat          | 2                               | 1         | 1         |
|                            | Maharashtra      | 37                              | 41        | 27        |
| Central Zone<br>(cluster5) | Chhaatisgarh     | 151                             | 156       | 189       |
|                            | MP               | 220                             | 178       | 134       |

Table 1: Different clusters of Zones showing admission of students

| Zone         | Zone wise admission of students |             |             |
|--------------|---------------------------------|-------------|-------------|
|              | Year 2009                       | Year 2010   | Year 2011   |
| East Zone    | 1205                            | 1140        | 1161        |
| North Zone   | 4078                            | 4393        | 4540        |
| South Zone   | 07                              | 10          | 07          |
| West Zone    | 39                              | 42          | 28          |
| Central Zone | 371                             | 334         | 323         |
| <b>Total</b> | <b>5700</b>                     | <b>5919</b> | <b>6059</b> |

Table 2: Year wise admission of students

Table 3 is derived for showing percentage of admission zone wise.

| Zone         | Zone wise Percentage(%) of students Admission in specific year |           |           |
|--------------|--|-----------|-----------|
|              | Year 2009  | Year 2010 | Year 2011 |
| Eastern Zone | 21.1%  | 19.3%     | 19.2%     |
| North Zone   | 71.5%  | 74.2%     | 74.9%     |
| South Zone   | 0.1%   | 0.2%      | 0.1%      |
| West Zone    | 0.7%   | 0.7%      | 0.5%      |
| Central Zone | 6.5%   | 5.6%      | 5.3%      |

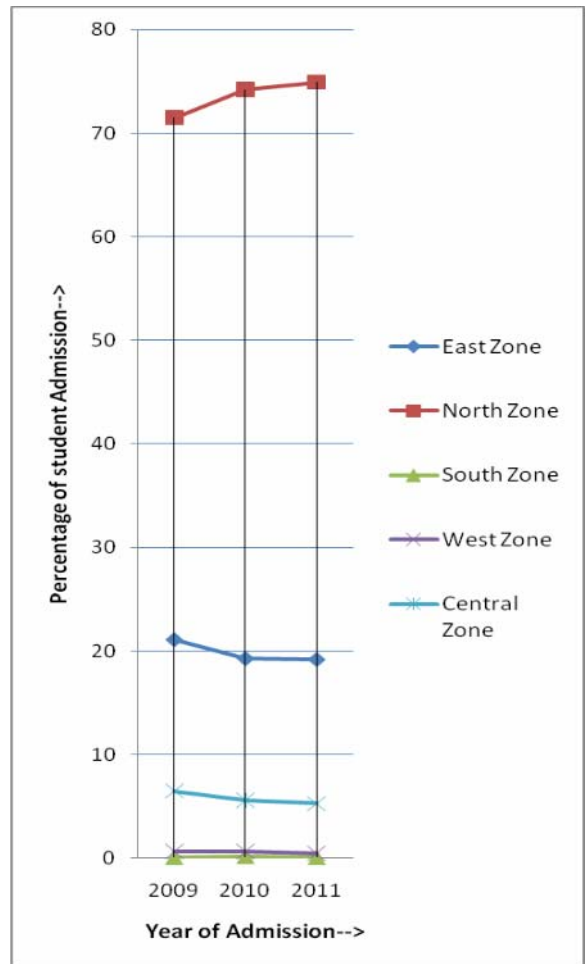
Table 3: Year wise admission for percentage of students of particular zone.

On the basis of Table 3, a graph is plotted in Figure 1. X axis shows year of admission and y axis shows percentage of student admission. Different colors in the graph represent different zones of the country.

#### IV. KEY FINDINGS AND RESULTS

The key findings and its implications from Table 3 and the graph shown in Figure 1 are as follows:

- 1) From Table 1, it is derived that maximum number of students took admission from North Zone and minimum number of students took admission from South Zone in year 2009.
- 2) In 2010, hierarchy of decent for taking admission is North zone, Eastern zone, Central zone, West zone and South zone.



**Figure 1:** Graph depicts zone wise admission corresponding to specific year.

- 3) It is also found that least admission is taken by South zone students and maximum admission taken by North zone students in all the three considered years.
- 4) From Graph in Figure3, it is also derived that total number of admissions from North zone is increasing in successive year.

## V. CONCLUSION

One of the biggest challenges that higher education faces today is predicting the paths of students and alumni. Institutions would like to know, which students will take interest in particular professional programs. Data mining uses a combination of an explicit knowledge base, sophisticated analytical skills to uncover hidden patterns. These patterns enable analysts to produce new observations from existing data. Data mining is a tool for academic intervention. The academic institutions could use this information to concentrate for academic assistance. In this research, one of the important findings is shown as student's interest of north zone towards professional qualification is increasing in every successive year.

In the future, we can plan to apply the proposed methodology to a wider scope with the hope that our research findings will truly enable academicians to setup proper strategy for growth of professional skills among students.

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