# INFO 5100 Application Engineering and Development

# Assignment 3 - University Model

**Team Members:**

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**Model Purpose:**

Performance Measurement Solution is an Analysis to measure the quality of the education that is provided to the students. This enables the Universities to track the Quality, which means keeping courses fresh and aligned to the industry trends. The approach here will depend upon an educational system involving faculty, courses and employers contributing to the professional growth of the student.

**Business Problems addressed:**

Performance measurement metrics has been applied for a student during their Undergrad /Grad program at the university and after graduating. This model involves interconnection between student, professor, course metrics and alumni data .By tracking the interconnection of course metrics and alumni data, we could get the professional growth of the student and also we can get to a conclusion if GPA matters to the professional growth of the student. This can be accomplished by utilizing the following metrics:

1. Student Performance Metric
2. Professor Performance Metric
3. Courses Performance Metric
4. Professional Growth Performance Metric
5. Career Success Metric

Even after graduation, the student’s performance is tracked through Employment performance measurement from the employer throughout a period of time. This Analysis can be utilized to track the current industry requirements and the most relevant courses that align with these requirements can be proposed to the students, this would help the university improve their quality of education offered by enhancing the existing course offerings or introduce new courses.

# **Performance Metrics**

## Student Performance Metric (SPM):

Student Performance metric measures the student’s performance at the University based on the student’s grades, research papers published, and projects created.

**Student Grades**

**Student GPA**

**Student Performance Metric**

The performance of a student is based on the following factors:

* 1. Grades
  2. GPA

|  |  |
| --- | --- |
| **Grade** | **GPA(Points)** |
| A | 4.0 |
| A- | 3.7 |
| B+ | 3.3 |
| B | 3.0 |
| B- | 2.7 |
| C+ | 2.3 |
| C- | 2.0 |

**Calculation of SPM:**

The Student Performance Metric is calculated on the scale of 10

SPM = (GPA\*2 + 2)

|  |  |  |
| --- | --- | --- |
| **Grade** | **GPA** | **SPM** |
| A | 3.8 | **3.8 \* 2 + 2 = 9.6** |

## Professor Performance Metric (PPM):

## Professor Performance metric gives us an insight about the professor’s performance in the university based on Students Ratings.

## Based on the Ratings that student provide we are using a custom sort to Rank the professor.

## 

**Professor**

**Student**

## setRating()

## 3. Courses Performance Metric (CPM):

## Courses Performance metric measures the Rating provided by the employer to the courses assigned by the University to their employees. This gives an insight to the employers about the courses that his employees have taken and rate the courses based on their industry relevance.

## Based on the Ratings that Employer provides we rank the courses using a custom sort and list them for the corresponding employees.

## 

**Courses Taken**

**Alumni**

**Employees**

## S setRating()

## 4. Professional Growth Metric:

Professional Growth metric measures the weightage of the student’s experience as a working professional which indicates the universities contribution to the student performance in their respective field.

**Promotions**

**Salary**

**Years of Experience**

**Career Growth Metric**

1. **Years of Experience:**

|  |  |
| --- | --- |
| 0-2 years | 2.5 Points |
| 3-5 years | 5 Points |
| 6-8 years | 7.5 Points |
| Over 9 years | 1. Points |

1. **Promotions:**

|  |  |
| --- | --- |
| 0 promotions | 2.5 Points |
| 1 promotions | 5 Points |
| 2 promotions | 7.5 Points |
| 3 promotions | 1. Points |

1. **Salary**

|  |  |
| --- | --- |
| 70k – 80k | 2.5 Points |
| 80k – 90k | 5 Points |
| 90k – 130k | 7.5 Points |
| 130k+ | 10 Points |

**Calculating Professional Growth Metric:**

Professional Growth Metric can be calculated on the scale of 10 by taking Years of experience, Promotions, Salary and we can take the average of the metrics.

|  |  |  |
| --- | --- | --- |
| **Years of Experience** | 4 years | 5 |
| **Promotions** | 1 promotion | 5 |
| **Salary** | 95k | 7.5 |
| **Overall Career Growth Metric**  **(CGM)** | Average of all metrics | (5+5+7.5)/3 = 5.83 |

## Career Success Metric:

Career Success Metric evaluates the student’s academic and career growth metrics. This indicates the overall performance of the student during the College period and their Professional Growth over the period of 5 years.

**Professional Growth Metric**

**Student Performance Metric**

**Aggregate Score**

**Career Success** = Student Performance Metric + Professional Career Growth

2

= (3.8 \* 2 + 2) + 5.83= 7.71 out of 10

2

**Conclusion:**

Even though the GPA Metric is high as 9.6, since the Professional Growth Metric is at only 5.83 it reduces the overall Career Success value which is calculated on the scale of 10. This clearly explains that the GPA score alone doesn’t matter for a student’s successful Professional growth Success.

So the above mentioned analysis metrics methods can be employed to the education system of the developing countries to provide quality education which aligns to the current industry trends, providing relevant Job opportunities and preparing the students in their desired field of career.