

**CLASS TITLE: EDUCATION DATA SCIENTIST**

**BASIC FUNCTION:**

Reporting to the Dean of Institutional Effectiveness, the Education Data Scientist uses their experience in institutional research and higher education in combination with their data scientist skillset to support the institutional research in developing insights and tools that increase student success.

**DISTINGUISHING CHARACTERISTICS:**

The Education Data Scientist analyzes large amounts of raw information to find patterns that will help improve operations and student success. Responsibilities include analysis of current and historical data on students, staff, departmental workload, enrollment, retention, and graduation. The Education Data Scientist executes strategic, innovative data driven analyses that provide valuable insight, working closely with other members of the Office of Institutional Effectiveness in gathering, analyzing, and reporting data. The EDS supports the development of dashboards, data visualizations, and automated reports and consults regularly with campus stakeholders, building productive professional relationships to understand their current processes and needs and to proactively identify opportunities for collaboration, automation, advanced analytics, and project development.

**REPRESENTATIVE DUTIES:**

Identify valuable data sources and automate collection processes

Undertake preprocessing of structured and unstructured data

Analyze large amounts of information to discover trends and patterns

Use machine learning and other approaches to analyze and categorize student engagement and learning

Build predictive models and machine-learning algorithms

Combine models through ensemble modeling

Present information using data visualization techniques

Propose solutions and strategies to operational challenges including ways to maximize student success

Collaborate with institutional research, planning, and development teams

Perform related duties as assigned.

## **KNOWLEDGE AND ABILITIES:**

### **KNOWLEDGE OF:**

Knowledge of data extraction, collection, and analysis tools (e.g., R, SQL, Python); familiarity with Canvas, Scala, Java or C++ is an asset

Knowledge of machine-learning research

### **ABILITY TO:**

Ability to use business intelligence tools (e.g., Tableau), data warehouses, and data frameworks (e.g., AWS, Redshift, Hadoop)

Interact, participate and conduct presentations to individuals, college groups, committees, organizations and others as assigned.

Analytical mind and problem-solving aptitude

Prepare comprehensive statistical and narrative reports.

Establish and maintain cooperative working relationships

Maintain a positive working environment and work towards a common goal.

## **EDUCATION AND EXPERIENCE:**

Any combination equivalent to: Bachelor's degree in Information Systems, Computer Science or related field and 2 years of increasingly responsible data warehouse & reporting, programming or systems analysis and design experience.

OR

An Associate's degree in Computer Science and 4 years of increasingly responsible data warehouse & reporting, programming or systems analysis and design experience.

OR

High school diploma, GED or equivalent certificate of competency and 5 years of increasingly responsible data warehouse & reporting, programming or systems analysis and design experience.

## **PREFERRED QUALIFICATIONS:**

Graduate degree in Data Science or another quantitative field.

## **WORKING CONDITIONS:**

### **ENVIRONMENT:**

Office environment.

**PHYSICAL DEMANDS:**

Incorporated within one or more of the previously mentioned essential functions of this job description are essential physical requirements. The chart below indicates the percentage of time spent on each of the following essential physical requirements.

- |    |                               |    |                                      |
|----|-------------------------------|----|--------------------------------------|
| 1. | Seldom = Less than 25 percent | 3. | Often = 51-75 percent                |
| 2. | Occasional = 25-50 percent    | 4. | Very Frequent = 76 percent and above |
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- |          |    |  |
|----------|----|--|
| <u>4</u> | a. | Ability to work at a desk, conference table or in meetings of various configurations.      |
| <u>1</u> | b. | Ability to stand for extended periods of time.   |
| <u>4</u> | c. | Ability to sit for extended periods of time.   |
| <u>4</u> | d. | Ability to see for purposes of reading printed matter.                                     |
| <u>4</u> | e. | Ability to hear and understand speech at normal levels.                                    |
| <u>4</u> | f. | Ability to communicate so others will be able to clearly understand a normal conversation. |
| <u>1</u> | g. | Ability to bend and twist.   |
| <u>1</u> | h. | Ability to lift <u>10</u> lbs.   |
| <u>1</u> | i. | Ability to carry <u>10</u> lbs.  |
| <u>4</u> | j. | Ability to operate office equipment.   |
| <u>1</u> | k. | Ability to reach in all directions.  |

*This job description is intended to describe the general nature and level of work being performed. It is not intended to be construed as an exhaustive list of all responsibilities, duties and skills required of individuals so classified.*