#### Trent University LogoEXEMPT JOB DESCRIPTION

**Job Title:** Business Intelligence Developer

**Job Number:** X-484 | VIP: 2031

**Band:** EXEMPT-6

**Department:** Institutional Planning and Analysis

**Supervisor Title:** Director, Reporting Systems and Analytics

**Last Reviewed:**  October 17, 2024

#### **Job Purpose:**

Reporting to the Director of Reporting Systems and Analytics, the Business Intelligence (BI) Developer transforms data into user-friendly, actionable information by developing analytics and business intelligence systems, reporting, dashboards, and metrics. These tools support evidence-based decision-making at all levels of the University. The BI Developer will engage in the collection, analysis, interpretation, and dissemination of institutional and market data for operational decision-making, assessment, and reporting. The BI Developer is also responsible for ensuring that all data processes adhere to the University’s data governance framework, maintaining high standards of data quality, security, and compliance.

As a key member of the Office of Institutional Planning and Analysis (OIPA), the University’s central hub for institutional data, the BI Developer plays a crucial role in supporting the University's data governance initiatives while working closely under the guidance of the Director. The BI Developer will seek decision-making, guidance, and escalate issues to the Director when necessary, ensuring a collaborative approach to maintaining the integrity and effectiveness of data processes.

#### Key Activities:

##### Business Intelligence (BI) Developer

* BI System Development: Designs, develops, implements, and maintains BI streams and pathways, such as dashboards, reports, and analytics that address issues, requests, and University requirements.
* Security and Access Management: Responds to access and security requests for dashboards and reports hosted on the enterprise reporting website.

##### Database Administration

* Reporting Infrastructure Maintenance: Supports and maintains the reporting infrastructure of the Office of Institutional Planning and Analysis, including MS-SQL databases, data warehouses, and cubes.
* Data Issue Resolution: Collaborates with university-wide colleagues to resolve data issues and analyzes their potential impact on institutional reporting.
* Data Management: Maintains OIPA’s data dictionaries, manages data extraction/manipulation, and diagnoses and resolves data integrity issues.

##### Institutional Reporting and Analysis

* Collaborative Projects: Collaborates with various University departments and committees on data analysis projects such as Cyclical Program Reviews, Responsibility Centered Management (RCM), and Finance for budget purposes.
* Data Handling: Accesses and manipulates large, diverse electronic data sets for analysis, interpretation, report creation, and responds to a broad range of information requests within the organization.
* Professional Reporting: Prepares accurate, professional reports to communicate information to users at all levels of the organization.
* End-User Reporting: Works with University colleagues to evaluate and enhance end-user reporting capabilities.
* Data Quality Assurance: Assists data analysts in other departments to ensure the integrity and quality (accuracy, relevance, reliability, consistency, completeness, timeliness) of institutional information used for decision-making across the University, in line with data governance policies.

#### Education Required:

* Honours University Degree (4 years) in a related Computer Science discipline.

#### Experience/Qualifications Required:

* Minimum of five (5) years of working experience with Microsoft reporting infrastructure including Management Studio (SSMS), Integration Services (SSIS), Reporting Services (SSRS), Analysis Services (SSAS), Power Platform (Power BI), and cloud technologies such as Azure and Fabric.
* Demonstrated proficiency in T-SQL, DAX, Python or R, and experience applying machine learning techniques and tools for data analysis and predictive modelling.
* Minimum of three (3) years of experience working with student information systems in a post-secondary environment (preferably Datatel).
* Strong analytical problem-solving skills and a thorough understanding of relational database design and function.
* Demonstrated ability to use various thinking skills to anticipate and solve problems.
* Clear, concise, and correct communication in written, spoken, and visual forms that meet the audience's needs.
* Ability to work as part of a team and foster good working relationships with internal and external stakeholders.
* Initiative and ability to work independently with minimal supervision.
* Ability to maintain confidentiality.
* Experience managing multiple tasks within a rapidly changing environment, with demonstrated time and resource management skills to complete projects.

#### Supervision:

* No formal supervision of others is required.

**Job Evaluation Factors:**

##### Analytical Reasoning

Work performed in OIPA is complex and multi-faceted, requiring analytical thinking and highly developed reasoning skills to solve a broad range of problems. Situations generally fall within a framework but can be broad in scope and lack standard practices for resolution. This requires recognizing, analyzing, and creatively defining practical solutions. Logical and critical thinking are essential to define problems, develop alternatives, and propose, plan, and implement solutions.

Examples:

* Several data requests require historical information from the student information system. The BI Officer is responsible for determining the appropriate method to extract, transform, and present the data clearly and professionally.
* Daily application data extraction allows senior management to track recruitment progress. The BI Developer must extract data from the institution’s report server (ELISIR), transform it into meaningful information, and load it into the OIPA Admissions data warehouse. This involves determining the correct table fields, creating TSQL scripts, designing Integration Services packages, building Analysis Services multidimensional models, creating report models for end-users, and scheduling packages to run at specific intervals.

##### Decision Making

The BI Developer is required to make complex decisions with occasional supervision from the Director of Reporting Systems & Analytics. The Information Manager must collaborate with university departments and may need to negotiate with colleagues and stakeholders to properly define analyses, using experience, discretion, and judgment.

Example:

* Data, reporting, or analysis requests are completed with little to no supervision. The BI Developer qualifies requests to determine their purpose, but the decisions on how to achieve the results are left to their discretion.

##### Impact

The impact on the organization is significant and long-term. Undetected errors may affect recommendations, decisions, or actions, leading to negative consequences for the entire organization, including its reputation. Incorrect information could result in reduced enrollment, posing moderate reputational and financial risks to the institution.

Example:

* OIPA provides reports containing data and analysis for planning, policy formation, and decision-making. The BI Developer is responsible for extracting data from various repositories, often confidential, and funnelling it into a single dataset for reports.

##### Communication

This role requires collaboration with university departments and stakeholders, consulting on issues, presenting complex information, explaining analysis and rationale, and making recommendations to senior management, faculty, and staff. Communication involves diverse contacts, both internal and external to the organization.

Internal:

* President, Provost, Vice Presidents, Directors, Registrar’s Office, Deans, Associate Deans, Chairs, Faculty, Managers, Senior Tutors, Students, Financial Services, IT, Marketing and Recruitment, and Committees.

External:

* External auditors, COU, and other post-secondary institutions.

##### Motor/ Sensory Skills

This role requires a high level of precision in motor and sensory skills. Job duties include extensive keyboarding, requiring dexterity and attention to detail and accuracy.

Motor/Sensory Skills:

* Keyboarding: Significant time spent on the computer, requiring accuracy and attention to detail.
* Hearing/Verbal: Effective communication with internal and external audiences.

##### Effort

Work involves a high level of mental effort, including sustained concentration, multitasking with competing demands, changing deadlines, time pressures, frequent interruptions, and distractions.

Mental Effort:

* Sustained concentration: Ability to maintain focus on projects to ensure their completion accurately and timely.
* Multitasking/Competing Demands: Ability to manage multiple projects with competing timelines, prioritize tasks, and adapt schedules for new priorities.

Physical Effort:

* Sitting: Prolonged sitting while working on a computer and attending lengthy meetings.
* Keyboarding: Extensive computer use.

##### Working Conditions

Physical:

* Prolonged sitting at a desk.
* Repeated movements with a mouse and keyboard.

Psychological:

* Stress related to the institution's dependence on data for decisions that affect enrollment and reputation.
* Stress related to meeting project and reporting deadlines.