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Position Summary

Principal Data Engineer

Purpose

Work as an integral member of the CIT team that supports the mission of the Center for International Blood & Marrow Transplant Research (CIBMTR) to advance transplant and cellular therapy research to improve patient survival and enrich their quality of life. Lead, mentor and develop a team of data engineers responsible for integrating and preparing data for analytical and operational uses. Provide thought leadership and technical expertise that align with CIBMTR strategic aspirations. Plan, design, develop and deploy data solutions that directly support data quality, data use and data sharing objectives of CIBMTR.

Primary Functions

- Collaborate with and advise the IT Director, as well as scientific, business and technology leadership to implement technology solutions that align with CIBMTR strategic vision and operational requirements.
- Collaborate with product owners to develop and maintain a Technology Roadmap(s) that reflect CIBMTR strategic priorities, stakeholder needs and technical dependencies.
- Lead, mentor, develop and directly oversee the work of a team of 4-6 data engineers
- Provide thought leadership, insights and expertise informed by experience and research of current and emerging technologies methods that align with our strategic aspirations and operational needs.
- Champion data quality, integrity and reliability throughout the research data life cycle by designing and promoting best practices.
- Provide hands-on delivery of solutions, including design, development testing, and maintenance of analytical architectures within a data ecosystem that meet the diverse needs of CIBMTR stakeholder groups
- Actively collaborate with team to ETL data, integrate data from different sources and domains, and develop pipelines that support data analysis and sharing.
- Recommend and operationalize standards, frameworks, and best practices for achieving maximum efficiency and consistency.
- Document systems according to established technology standards and assist functional users in the development of procedures and documentation of processes.
- Incorporate security by design principles to follow information system security requirements consistent with CIBMTR contractual and compliance obligations.



- Develop and deliver periodic knowledge sharing presentations to leadership and team members, including strategic uses of as they may pertain to achieving future state objectives.

Knowledge – Skills – Abilities

The candidate will have qualifications that include the following:

- Demonstrated leadership and mentoring of technical teams
- Strong critical thinking, intuition, problem solving and attentiveness to detail.
- Strong achievement focus.
- Fluency in data modeling and experience in designing and developing analytical data pipelines that leverage relational database concepts and other analytical architectures, including star schema, data lake and other conventional data warehouse.
- Must be knowledgeable in software development lifecycles/frameworks, including AGILE Scrum and waterfall
- Strong interpersonal, presentation and collaboration skills and can communicate all aspects of the job requirements, including the creation of formal documentation
- Proficiency in SQL and/or Oracle PL/SQL
- Knowledge of advanced analytical methods, including machine learning preferred
- Knowledge of analytics packages, including R or SAS is preferred
- Demonstrated Proficiency in database technologies (Oracle RDBMS, SQL Server) is preferred
- Proficiency with scripting languages: Perl, Python, and/or Javascript is preferred
- Proficiency with one or more of C#, .NET and Java is preferred
- Knowledge of RESTful web services or APIs is preferred

Organizational Structure

Building: Clinical Cancer Center

Department: Medicine

Division: CIBMTR

Reports to (Title): IT Director

Direct Reports (Titles): Sr. Data Engineers, Data Engineers, Database Analysts, Programmer Analysts

Collaborates with (Titles): CIT managers and staff, CIBMTR Scientific Directors, Clinical Research Coordinators, Statisticians, and any other roles as defined.

Specifications

Appropriate education and/or experience may be substituted on equivalent basis

Minimum Required Education: Bachelor's Degree

Minimum Required Experience: 8 years

Preferred Education: Master

Preferred Experience: 10

Field: Computer Science, Biomedical Informatics

Certification: CITI training required within 90 days of hire



Classification

Grade Name	20
Full-Time Equivalent	1.0
FLSA Status	Exempt
FLSA Test	Computer Professional
Workweek	Full-time role with expectations for coverage during core business hours and flexibility required as necessary to accommodate business needs.
Job ID	
Job Name	Data Architect
Position Category	Information Services

Job Scope

- Complexity* – requires sound judgment; leads difficult and involved planning of initiatives
- Impact* – errors may result in extensive damage; constant attention to accuracy required
- Autonomy* – individual responsible for completion of work; seeks supervision as appropriate
- Communication* – involved in frequent conflict resolution; communicates with senior leaders
- Responsibility* – influences others
- Confidentiality* – confidential information used frequently to make decisions
- Leadership* – prioritizes work of others or may provide supervision

Physical Requirements

Work requires occasionally lifting moderate weight materials, standing, or walking continuously.

Risk Potential

Infrequent exposure to hazards such as dust, fumes, or extreme temperatures, airborne or blood borne pathogens, extreme temperatures, or allergens.

Sensory Acuity

Ability to detect and translate speech or other communication required. May occasionally require the ability to distinguish colors and perceive relative distances between objects.

Work Environment

Occasional exposure to dust, noise, temperature changes, or contact with water or other liquids. Work is performed in an environmentally controlled environment.



Performance Dimensions

Collegiality

Exhibit confidentiality, honesty, and actions that build trust and strengthen relationships. Listen to others and effectively communicate in a clear and concise manner through written and verbal communication. Demonstrate respect and commitment to the values of diversity and equity; seek out and incorporate diverse perspectives into decision making.

Excellence and Creativity

Exhibit initiative and ingenuity by taking ownership of tasks to proactively improve services, avoid problems, or develop opportunities. Generate novel and valuable ideas to impact institutional missions.

Identify and implement new methods to increase efficiency and quality.

Education and Development

Displays an ongoing commitment to continuous learning and self-improvement in one's area of responsibility. Actively seek out mentorship and learning opportunities that can be applied to current and future work activities. Develop and maintain professional affiliations. Participate in design, development, and/or evaluation of instructional materials, methods, courses, or programs.

Agility and Judgment

Remain flexible and versatile in rapidly changing environment and adapt quickly to changing circumstances. Change behavioral style or method of approach when necessary to achieve a goal. Make timely and sound decisions based on analysis of information, experience, and logic. Show reliability and accountability in the successful completion of all work.

Stewardship and Institutional Citizenship

Support transformational change to achieve institutional vision and strategies. Be an active and thoughtful participant in institutional initiatives, meetings, and committee work. Conserve resources and use in an efficient and cost-effective manner across all institutional missions. Look for ways to improve and promote quality within area of influence.



Disclaimers

Background Check

Employment in this position may be contingent upon successfully completing a background and criminal history check, caregiver background check in accordance with the Wisconsin Caregiver Background Check Law, physical examination, and / or driving record check.

Equal Opportunity Employer

The Medical College of Wisconsin is an affirmative action / equal opportunity employer and does not discriminate in hiring or employment on the basis of age, sex, race, color, religion, national origin, veteran status, disability, or sexual orientation.

Diversity and Inclusion

The Medical College of Wisconsin defines diversity as a commitment to recognizing and appreciating the variety of individual differences in an environment that promotes and celebrates individual and collective achievement. The diversity of MCW continues to be an important source of innovative ideas and creative accomplishments.

Confidentiality

Employees that have access to MCW, affiliate, subsidiary, or student data or Protected Health Information

(PI), or research protected information are obligated to protect the confidentiality and proper use and access of this information in order to prevent loss, misuse, unauthorized access, unnecessary identification, or security breaches.

Completeness

This job description is not an employment contract and the Medical College of Wisconsin may modify this document at any time. This document is intended to indicate the types of tasks and levels of skill, effort, and responsibility required by positions assigned this title. This information shall not be construed as a declaration of the specific duties and responsibilities of any particular position. It is not intended to limit or modify the right of any supervisor to assign, direct, and control the work of direct reports. The functions described are not to be interpreted as exclusive or all-inclusive of the various functions performed.