UW HEALTH JOB DESCRIPTION

Data Scientist II			
Job Code: 330092	**FLSA Status:** Exempt	**Mgt. Approval:** J. Long	**Date:** July 2021
Department: Enterprise Analytics		**HR Approval:** N. Lazaro	**Date:** July 2021

JOB SUMMARY

The Data Scientist II is constantly showing and pushing the boundary of how healthcare's most important questions and problems can be answered using data. The Data Scientist II uses everything at his or her disposal, starting with large data sets and varied types of structured and unstructured data and applying a range of techniques including statistical, machine learning, and natural language processing, to discover, explore, and uncover, patterns and insights and distill them into readily consumable formats and visualizations. Ultimately, the Data Scientist II is responsible for doing whatever is necessary to turn data into actionable, data-driven insights that enhance the delivery of clinical care and clinical decision-making.

The Data Scientist II work closely with machine learning engineers, front-line clinicians, stakeholders, informaticists, and researchers, while employing a robust knowledge of healthcare, to deliver the right solution. The Data Scientist II performs experiments and conduct learning to identify the best algorithms and solutions. The Data Scientist has a bias towards actionable insights in the name of "getting data science into the system".

The Data Scientist II is conscious of advancing the data science maturity at UW Health and defining and showing how data science supports the organization's overall mission and vision.

Data Scientist II is a valued contributor within UW Health IS who plays the critical role in executing data science projects independently. They execute high-quality solutions in an established problem space. The Data Scientist II holds team-level and project-level responsibilities.

MAJOR RESPONSIBILITIES

Solution Development and Delivery:
Use data to answer questions and solve problems; uncover insights and patterns in complex data, using complex data and new types of data and methods

Develop predictive and statistical models, insights, patterns, visualizations, that can be used to improve decision making in and improve clinical operations with the focus of creating actionable insights to "get data science into the system". Executes high-quality solutions in a known problem space while problem-solving specific challenges.

Process and Standards
Improve team-level processes

People:
Deliver and communicate data science solutions, findings, and statistical concepts, to team leaders and stakeholders.

Work on a cross-functional team to design and deploy solutions in production software and systems using agile principles and agile scrum methodologies.

Informally mentor other staff in data science techniques and solutions

Technical Leadership
Hold team-level responsibilities and may lead the team for small & medium scale projects

ALL DUTIES AND REQUIREMENTS MUST BE PERFORMED CONSISTENT
WITH THE UW HEALTH PERFORMANCE STANDARDS.

JOB REQUIREMENTS

Education	Minimum	Bachelor's degree in Computer Science, Statistics, Data Science, or relevant quantitative Engineering field (Four (4) years relevant work experience may be considered in lieu of Bachelor's degree)
	Preferred	Master's or Doctorate degree in Computer Science, Statistics, Data Science, or relevant Engineering field
	Minimum	None

Work Experience	Preferred	• 2 years of data science or machine learning engineering experience including delivering high-quality data science solutions to stakeholders • 2 years of experience with data and statistical analysis preferably with large data sets or unstructured data (free text, images, machine or IoT) • 1 year of experience in healthcare (provider or payer) •
Licenses & Certifications	Minimum	None
	Preferred	• Epic certifications in Cogito • Epic badge or certification in Cognitive Computing Platform

Required Skills, Knowledge, and Abilities		Intermediate proficiency in all four of the following:
		
		1. Working with "big data" including large volumes of data, unstructured data, streaming data, data veracity:
		   • Skilled at working with unstructured data such as text, streaming, or machine data, and working with "big" data technologies like Apache Spark
		   • Solid understanding of data structures, data modeling, dimensional modeling
		   • Skilled in creating visualizations of data such as ggplot, matplotlib
		
		2. Coding techniques, best practices, and mindset, for data science:
		   • Skilled at writing robust code in Python, R, Spark, SQL including notebook-based workflows (Jupyter, R, Spark) and creation of reusable code packages and libraries, and at version control (GitHub)
		   • Skilled at testing code including techniques best practices used in software testing
		
		3. Statistics theory and techniques used in data science:
		   • Strong knowledge of math, probability, statistics, and algorithms, such as linear algebra, Bayesian statistics
		   • Skilled in using statistical methods (such as boosting, generalized linear models/regression, random forests, social network analysis) and in using machine learning techniques (such as artificial neural networks, clustering, and decision tree learning)
		
		4. Healthcare subject matter expertise:
		Subject matter expertise in one or more areas such as hospital operations, ambulatory operations, population health management, performance measure development, healthcare administration, patient satisfaction, strategic planning, labor and productivity analytics, financial modeling, cost accounting, revenue cycle management, and survey design/development
		
		Solution Development and Delivery:
		Outstanding analytical and problem-solving abilities
		Identifies and leverages sufficiently appropriate statistical methods, data science techniques, or technological capabilities, to solve the problem, among the approaches most used by the organization.
		
		Process and Standards
		Ability to process exploratory feedback and use it constructively
		Ability to break down a data science solution into constituent tasks or sub-projects
		
		People:
		Engages in cross-functional interactions
		Ability to work in a team
		Ability to work in agile, iterative frameworks
		
		Communication, Mentoring, and Teaching:
		   • Intermediatecompetency for written and verbal communication

- Intermediate at mentoring and teaching others on data science concepts, techniques, and mindset

Technical Leadership:
Developing intermediate leadership competency including technical leadership. Competency includes:
- Leads with integrity. Maintains strategic orientation. Demonstrates business and financial acumen. Champions innovation. Manages execution. Leads and develops people.
- Developing intermediate proficiency with technical leadership: Sound technical judgment including decision-making amidst ambiguity, trade-offs, and constraints. Fluency at multiple levels in the technical stack. Balances long-term technical vision against short-term deliverables. Promotes elegant design and reduces unnecessary technical complexity. Works backwards and drives towards meaningful requirements. Stays current with a solid technical understanding of technology trends.

PHYSICAL REQUIREMENTS

Indicate the appropriate physical requirements of this job in the course of a shift. *Note: reasonable accommodations may be made available for individuals with disabilities to perform the essential functions of this position.*

Physical Demand Level		Occasional Up to 33% of the time	Frequent 34%-66% of the time	Constant 67%-100% of the time
X	**Sedentary:** Ability to lift up to 10 pounds maximum and occasionally lifting and/or carrying such articles as dockets, ledgers and small tools. Although a sedentary job is defined as one, which involves sitting, a certain amount of walking and standing is often necessary in carrying out job duties. Jobs are sedentary if walking and standing are required only occasionally and other sedentary criteria are met.	**Up to 10#**	**Negligible**	**Negligible**
	Light: Ability to lift up to 10 pounds maximum and occasionally lifting and/or carrying such articles as dockets, ledgers and small tools. Although a sedentary job is defined as one, which involves sitting, a certain amount of walking and standing is often necessary in carrying out job duties. Jobs are sedentary if walking and standing are required only occasionally and other sedentary criteria are met.	**Up to 20#**	**Up to 10#** or requires significant walking or standing, or requires pushing/pulling of arm/leg controls	**Negligible** or constant push/pull of items of negligible weight
	Medium: Ability to lift up to 50 pounds maximum with frequent lifting/and or carrying objects weighing up to 25 pounds.	**20-50#**	**10-25#**	**Negligible-10#**
	Heavy: Ability to lift up to 100 pounds maximum with frequent lifting and/or carrying objects weighing up to 50 pounds.	**50-100#**	**25-50#**	**10-20#**
	Very Heavy: Ability to lift over 100 pounds with frequent lifting and/or carrying objects weighing over 50 pounds.	**Over 100#**	**Over 50#**	**Over 20#**
List any other physical requirements or bona fide occupational qualifications:				