

Data Scientist/Data Engineer

At Carbon Engineering, our vision is to lead the world in the large-scale removal of carbon dioxide from the atmosphere and advance our shift to a sustainable carbon-neutral society. Based in the outdoor recreation hub of Squamish, BC, this role will be a great fit for someone who feels passionately about this vision, and who wants to be a part of a fast-paced culture where contributions are noticed.

Position Scope

This is a senior role for a data scientist, data engineer or statistician with experience in statistical data analysis and industrial experiment design. The incumbent will utilize a wide array of Pilot Plant data points to assess chemical process correlations, lead experiment design and drive process optimization within the operations team. The successful candidate will have an opportunity to shape this new role, support CE in becoming a data driven organization and champion best practices in data exploitation.

- Reports to the Manager, Plant Operations.
- Responsible for organizing and analyzing data and deriving insights from a sensor suite that delivers 10M+ data points per day.
- Work collaboratively with Operations team staff to design industrial experiments, formulate data monitoring requirements, identify and interpret trends and make meaningful conclusions and recommendations.
- Perform complex in-depth analyses using statistical methods and models to characterize process relationships, identify and troubleshoot anomalous behavior and drive process optimization.

Responsibilities

- Provide data management support to ensure ongoing delivery of high-quality data.
- Identify, track and report meaningful Pilot Plant KPIs to characterize and validate plant performance.
- Acquire data from primary or secondary data sources, filter and clean data, and maintain databases/data systems.
- Develop and implement programs and scripts for extraction, processing and analysis of data from current and legacy experimental datasets.
- Develop and implement data collection systems and other strategies that optimize statistical efficiency and data quality.
- Advise process leads on data gathering requirements for process/relationship characterization.
- Perform probabilistic and deterministic linkage of data.
- Develop data management functionality to expand recorded data output in order to maximize characterization opportunities.
- Develop and implement systems and processes to assess and ensure accuracy, integrity and quality of data and provide recommendations on streamlining processes for data integration/mining.
- Create and communicate best practices and mentor staff in experimental design and data analysis.
- Participate as a team member in experiment design, planning and review meetings.
- Establish and prioritize Carbon Engineering's data management requirements and develop, implement, improve, document and maintain solutions for these requirements.

- Provide engineering and data management input for future pilot project components as well as future full-scale developments.
- Conceptualize, design and test new data management system functionalities to provide insight and aid in optimizing plant health and reliability.

Qualifications

Education: Masters/PhD in Engineering, Math, Statistics, Computer Science or related field.

Experience: 8+ years of post-education experience in engineering, data science or analytics.

- Background in database architecture and queries (SQL/noSQL) with fluency in data mining and manipulation.
- Strong programming skills using statistical packages for analyzing large datasets (Excel, Python, R etc).
- Proficiency in analyzing data using statistical methods (e.g. regression modeling, time series analysis, inference, Bayesian methods, sampling theory decision theory, likelihood estimation).
- Strong understanding of experiment design (e.g. multivariate testing, full factorial, fractional-factorial).
- Experience processing, filtering, and presenting large quantities of data in an industrial process environment.
- Ability to balance multiple demands and work both independently and as part of a team.
- Excellent verbal and written communication skills.
- Can-do attitude and commitment to quality and continuous improvement.
- Creative analytical and problem-solving skills with strong attention to detail.
- A passion for digging into data and drawing out insights from large and complex datasets.

If this seems like the dream job for you, send your resume to careers@carbonengineering.com and quote "Data Scientist" in the subject line.