### Part 1: Position Details

<table>
<thead>
<tr>
<th>Position Title:</th>
<th>Data Scientist</th>
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</thead>
<tbody>
<tr>
<td>Assigned Manager:</td>
<td>Enter name of the Manager</td>
</tr>
<tr>
<td>Location:</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>Department:</td>
<td>Enter department name</td>
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<tr>
<td>Status:</td>
<td>Enter employment status</td>
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<tr>
<td>Direct reports:</td>
<td></td>
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<tr>
<td>Date updated:</td>
<td>Click here to enter a date.</td>
</tr>
<tr>
<td>Updated:</td>
<td>29/01/2019</td>
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</tbody>
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### Part 2: Role Purpose

Quantum Discoveries is transforming the way mineral resources are discovered. Our R&D and Corporate headquarters are in Boston with additional operations in Chile. We developed a novel Discovery Platform that fuses Artificial Intelligence with codified human knowledge to significantly improve the rate of success to discovery large mineral deposits. We are looking for the talented data scientists to join us in our mission to discover.

The Data Scientist will actively participating in the research, design, implementation, and operation of Data Science projects. Their main focus will be in developing and applying data science methodologies, performing statistical analysis, and building high quality prediction systems.

### Part 3: Main Responsibilities

The Data Scientist will apply their strong background and knowledge to:

- Participate in and support data science projects
- Develop and maintain data science internal products
- Collaborate in the analysis and design of new Data Science tools for mineral discovery
- Participate in the Discovery Operations as a data science domain expert
- Conduct data exploration and data preparation steps, feature and algorithm selection, model development and validation
- Perform research and due diligence on data science advancements
- Collaborate in projects with external providers
- Present projects, analysis, and results to non-expert, management-level, and business audiences during a project’s life cycle

### Part 4: Key Responsibilities/Tasks

- Data mining using state-of-the-art methods
- Extending company’s data with third party sources of information when needed
- Enhancing data collection procedures to include information that is relevant for building analytic systems
- Processing, cleansing, and verifying the integrity of data used for analysis
- Doing ad-hoc analysis and presenting results in a clear manner
- Define, implement, and operate data lifecycle processes
  - Data selection
  - Data preparation
  - Data flow management
- Define, implement, and operate data science systems
  - Metrics definition and evaluation
  - Algorithms selection, tuning, and evaluation
  - Model development, tuning, and evaluation
- Define, implement, and operate validation processes in the data science domain
  - Data validation
  - Model validation
  - DS flows validation
  - Software validation
- Define, implement, and operate data science infrastructure
  - Develop and maintain data science hardware, software and data base infrastructure
  - Evaluate and incorporate external solutions to in-house technology portfolio
# Part 5: Relationships and main interactions

- Quantum Discoveries Team
- Discovery Lab Manager
- Quantum Discoveries Management Team
- VP R&D

# Part 6: Qualifications and Experience

- University MSc or PhD degree in applied computational mathematics, computer science, statistics, artificial intelligence, engineering or similar field
- At least 4 years of relevant work experience in Data Mining/Statistical Analytics/Predictive Analytics/Machine Learning
- Excellent understanding of machine learning techniques and algorithms
- Up to date knowledge of current applied Data Science methodologies
- Experience processing and analyzing spatial information, geographically anchored data
- Experience using visualization to convey and generate insights from data
- Extensive experience with data science frameworks (R, NumPy, scikit-learn, Pandas, MatLab)
- Extensive experience in operating software in data rich environments
- Experience in programming languages (e.g. Python)
- Geological experience preferred, but not essential

# Part 7: Knowledge and Skills

- Applied statistics skills
- Proficiency in using query languages (SQL, Hive, Pig)
- Experience with NoSQL databases
- Experience with data visualization tools
- Scripting and programming skills (e.g. Python)
- Excellent written and verbal communication in English

# Part 8: Personal Competencies and Attributes

- Data-oriented personality
- Demonstrated experience as an active leader and team member
- Open minded and flexible and ability to think outside the box
- Organized and capable of detailed planning and strict execution
- Capacity to translate complex ideas into simple conceptual ideas
- Willing to take risks and work hard
- Critical point view
- Innovative – seeking to continually improve quality
- Focused on deliverables
- Ability to thrive in a multidisciplinary and multicultural environment

# Part 9: Location

- Position located in Boston, MA
- Potential travel for meetings

# Part 10: Quantum Discoveries Factor

- Goal oriented
- Enthusiastic, passionate, curious and creative
- Team Spirit