

# Axiom Data Science Capabilities

## Company Summary

Axiom Data Science supports the government, academic and private sectors with services and capabilities in data management and analysis, software engineering and cyberinfrastructure. Axiom works primarily in the Internet of Things, Big Data and Machine Learning domains.

The company operates in North America with offices located in:

- Wickford, Rhode Island
- Portland, Oregon
- Anchorage, Alaska

## Major Clients



## Core Capabilities

**High Performance Computing** - Axiom operates its own private cloud with approximately 5,000 processing cores and 1.5 petabytes of high performance storage. Compute and storage nodes are interconnected over a Mellanox Infiniband fat tree network topology enabling data throughput of 240 Gigabits per second. Applications and systems are managed via Kubernetes and Docker with distributed storage handled by GlusterFS.



**Development Operations** - Axiom has a culture of strong development operations to standardize and streamline the application development cycle.



- Ansible - Configuration and Orchestration
- GitLab - Continuous Integration and Continuous Delivery
- Prometheus - Metrics and Monitoring



**Cluster Computing** - Axiom has acquired deep experience using horizontally scalable computational frameworks such as Apache Spark and Dask enhanced with Alluxio to perform parallel compute and MapReduce operations on large scale Big Data problem sets.



**Operational System of Systems** - Axiom has developed and currently maintains several large-scale operational data assembly and information processing centers. These systems poll sources of information existing over the Internet and ingest, transform and act upon the data in real-time. The event-driven architecture relies upon several layers of technology.

- Apache Kafka, Postgres and Redis - Messaging and Storage
- Python, xarray, Pandas and Luigi - Data Processing Pipelines
- D3, NodeJS, AngularJS - User Interface



## Services Offered

- **Big Data Management and Analysis** - Manage, process, and analyze disparate data at any scale using modern Big Data cluster computing techniques.
- **Internet of Things** - Monitor, access, process and act upon data feeds in real time.
- **Artificial Intelligence** - Machine learning, machine vision and neural networks.
- **Cyberinfrastructure** - Support and technology for teams and research programs working on data-intensive projects.

## NAICS Codes & Contract Information

518210

Data Processing, Hosting, and Related Services

519130

Custom Computer Programming Services

541512

Computer Systems Design Services

DUNS Number: 626150663

CAGE Code: 4EGN2

GSA Contract: GS35F026BA