



Artificial Intelligence & Machine Learning (AI/ML)

CAPABILITY OVERVIEW

Artificial Intelligence and Machine Learning (AI/ML) technologies are critical to meet the requirements for emerging defense and space initiatives. At ASRC Federal, our machine learning, advanced analytics, and suite of data science tools provide actionable intelligence needed to solve complex challenges. Our team of leading-edge researchers, technologists, and data scientists create data processing and analysis platforms, tools and services, and provide geospatial intelligence support for our customer's defense and space missions.

Our team brings in-depth AI/ML expertise in the full spectrum of aerospace domain knowledge through decades of hands-on experience in space mission operations, as well as software and systems development. We provide state-of-the-art solutions to NASA, NOAA and the DoD with experience spanning satellite health analysis, automated satellite anomaly detection, predictive analytics, and safety engineering analysis and monitoring to onboard instrument data calibration and navigation.

PROGRAM SPOTLIGHT

AI/ML Proves Instrumental to GOES-R Satellite Ground System for NOAA

ASRC Federal developed and deployed an AI/ML tool that identifies calibration issues in near real time - identifying anomalies associated with spacecraft health and safety data before they reach their yellow or red limits thereby lowering risk and increasing operational efficiency.

AREAS OF EXPERIENCE

Satellite & Launch System Health/Safety Monitoring & Analysis

Our team has extensive domain knowledge on satellite and ground system management and monitoring using AI/ML enabled tools that can provide dynamic limits to help detect and alert operators to any subtle changes to the behavior of the satellites.

Onboard Instrument Health/Safety Monitoring & Data Processing Monitoring

We provide insight to instrument health and safety as well as optimizing instrument features - detecting and selecting the optimal performing photodetector to use for data image processing.

Augmented Intelligence Systems

We create systems that augment human operators - capturing domain expert knowledge and autonomously providing key insights based on the system behavior.

Bulk Creation of Synthetic Satellite Data

Our team has experience in creating and producing realistic satellite simulations, enabling the bulk creation of synthetic satellite data used to help train machine learning algorithms. This provides new training methodologies for spacecraft anomaly predictions.

Automated Satellite Data Anomaly Detection

We create efficiencies and improvements to human operators and engineers through processes to simplify data structures from various satellite inputs, reducing noise and automating a once manual process. This allows the operators and engineers more productive time for more mission critical needs.

KEY CUSTOMERS



CONTACT

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ABOUT US

ASRC Federal's family of companies deliver successful mission outcomes and elevated performance for federal civilian, defense and intelligence agencies while building an enduring enterprise focused on customers, employees, and shareholders.

ASRC Federal offers broad and highly technical expertise in digital operations and IT modernization, software, applications and analytics, engineering solutions, professional services, and infrastructure operations.

As a wholly owned subsidiary of Arctic Slope Regional Corporation, an Alaska Native Corporation, we are inspired by the Iñupiat culture. We embrace **stewardship** and the idea of using every resource effectively; **teamwork** when striving to achieve goals and building a collaborative environment; **integrity** in adhering to high moral principles and professional standards; **respect** in welcoming and regarding the differing opinions, experiences, rights and traditions of others as we build a diverse and inclusive workplace; **accountability** in that we meet our commitments and take responsibility for our results; and **continuous improvement**, always striving to make things better, raising the bar and staying humble.

MARKETS WE SERVE



Space



Defense & Intel



Civilian



National Security



Health

- + ASRC Federal and our subsidiaries hold a number of credentials including:
 - **CMMI Level 5 Development (subsidiary)**
 - **CMMI Maturity Level 3 for Services and Development**
 - **27001 Certification for Security Management**
 - **AS9100D / ISO 9001: 2015 Certification for Quality Management**

HOW TO GET TO US / CONTRACT VEHICLES

- + ASRC Federal represents a variety of socio-economic categories including small business and 8(a). Our companies' portfolio of GSA schedules, GWACS and agency specific contract vehicles enables our customers to procure professional services and technology solutions tailored to their requirements, using a streamlined acquisition approach. Our experienced GWAC Program Management Office (PMO) provides collaborative support and leadership throughout the contract lifecycle.
- + To view our full list of contract vehicles, please visit:
www.asrcfederal.com/contract-vehicles