



DATA & AI SOLUTION GUIDE

Data without context leaches productivity from your organization. Deriving actionable insights from your data depends on understanding the ways in which it can be measured and leveraged to bolster services, efficiency, and organizational objectives. Without that expertise, separating the signal from the noise becomes impossible, and you end up stuck with vast amounts of data that don't tell a coherent story.

ECS is the single largest provider of **AI/ML solutions** to the DoD. Our solutions have helped organizations **develop computer vision (CV) models for unmanned vehicles, perform sensitive intelligence and business research, and protect our nation's critical environmental assets.** As a managed services provider (MSP), ECS also serves as an AI integrator across multiple domains, adopting a vendor agnostic approach to ensure we provide the best possible solutions for our customers.



AI DATA MANAGEMENT

CHALLENGE: The sheer volume of data generated every day (an estimated 2.5 quintillion bytes) creates management challenges for enterprise organizations of all sizes. Additional challenges include judging and maintaining data quality and meeting industry-specific or federal norms and regulations.

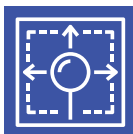
SOLUTION: ECS employs more than 200 data professionals and more than 60 AI/ML engineers and data scientists to eliminate the time and resource burden of collecting, processing, and analyzing data. Enterprise user management makes data available on a need-to-know basis with appropriate user/role/attribute level controls.



DELIVERY FROM DIFFERENT VENDORS

CHALLENGE: Too often, the data needed to build and train algorithms is siloed in disparate systems delivered from different vendors, each with its own set of data tables, structures, and fields of data.

SOLUTION: ECS manages multiple data pipelines to get the right data where it needs to be, when it needs to be there. ECS acquires and manages training data for algorithms, ensuring optimal performance. Finally, ECS builds data pipelines that ensure all algorithms are functional, meaning the right algorithm can be matched with the right task regardless of provider.



GLOBAL AI FIELD SERVICE OPERATIONS

CHALLENGE: Analysts often deal with time-and-labor-intensive workflows in processing data and producing actionable intelligence, putting critical decision makers at a disadvantage.

SOLUTION: ECS' deployable CONUS and OCONUS engineers embed within customer sites to ensure solution adoption, gather valuable feedback, and assist in integrating AI seamlessly into existing workflows, maximizing effectiveness and efficiency.



DISTRIBUTED DATA ARCHITECTURE

CHALLENGE: Traditional, centralized data architecture is slow to update, lags data generation sources by hours or even days, and has strong dependencies that make for rigid, inflexible datasets.

SOLUTION: ECS utilizes a domain-oriented, distributed architecture approach to data management (i.e., data mesh), giving ownership of data to its producers, avoiding bottlenecks that result from dealing with a centralized team, and reducing replication delays and schema issues. The US Army embraced the data mesh approach to data management in its October 2022 Army Data Plan (ADP).



AI DEVELOPMENT

CHALLENGE: Relying on a centralized data architecture slows down AI training and development at the local level, while unevenly distributed focus leads to suboptimal data products.

SOLUTION: With our data mesh approach, ECS empowers data producers to publish their own data products, leading to more agile data management and faster AI evolution at the local level. By distributing the responsibility for maintaining data products while still maintaining a central data catalogue and federated policy management, ECS ensures better quality data for AI development while still adhering to strict security standards.



PATHFINDER

CHALLENGE: Collecting, processing, and analyzing threat data can be time- and labor intensive, making it difficult for your cybersecurity solutions to define and prioritize vulnerabilities and properly safeguard your data.

SOLUTION: AI solutions make collecting and analyzing data smarter and more efficient. ECS Pathfinder uses AI to predict when malicious actors will strike, prioritizing vulnerabilities by attack probability, risk, and urgency and increasing the value of every dollar you spend on cybersecurity.

Interested in learning more about ECS' Data & AI solutions?

Reach out and **talk to an expert** at PAI@ecstech.com

ECS is a leading information technology provider delivering solutions in cloud, cybersecurity, software development, IT modernization, and science and engineering. The company's highly skilled teams approach and solve critical, complex challenges for customers across the U.S. public sector, defense, and commercial industries. ECS maintains partnerships with leading cloud and cybersecurity technology providers and holds specialized certifications in their technologies.