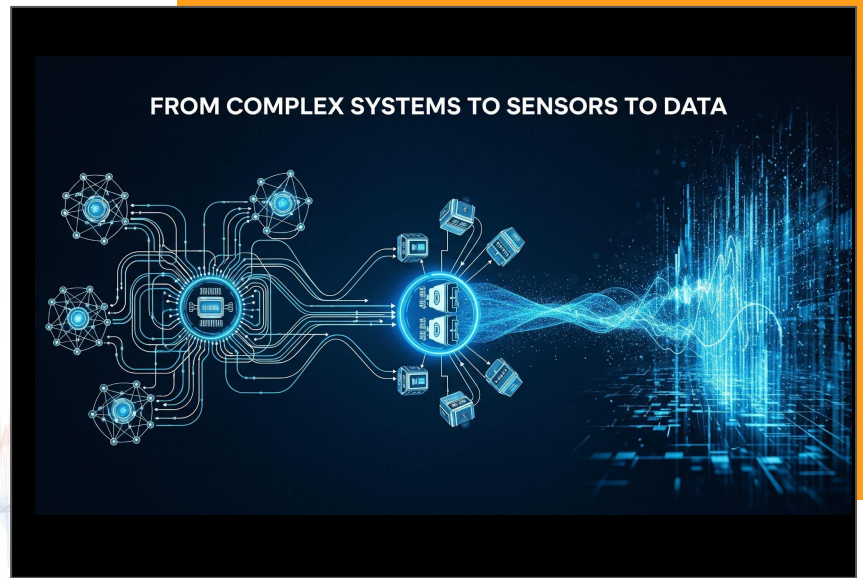# falkonry

FROM COMPLEX SYSTEMS TO SENSORS TO DATA

Navy's First Choice for Signal-Aware AI

DIGITAL ENGINEERING TOOLS FOR THE NAVY SINCE 2020

For Power Systems

The US Navy faces growing challenges in ensuring resilient and efficient power operations across both shipboard and shore-based systems. Modern platforms generate trillions of data points of sensor data that are extremely difficult for conventional analytics tools. This leads to difficulty in collaboration, project delays, and critical information not available to warfighters.

Key Applications

★★ Shipboard Power Systems

- Detect emerging anomalies in generators, converters, and distribution systems
- Monitor critical loads and identify perturbations caused by cyber or electromagnetic interference
- Provide early warnings for equipment health to support Condition-Based Maintenance (CBM+)

★★ Shore Power Systems

- Monitor base and port power distribution for resilience and continuity of operations
- Support demand response and optimize power utilization during high-load or degraded conditions
- Integrate with existing Navy testbeds and digital engineering environments.

Aligned with Navy Technology Priorities

Falkonry' COTS engineering tools are purpose-built to exploit for power system and sensor data at scale and at the edge. Its specialized machine learning identifies automatically identifies anomalies and patterns without programming or custom modeling. Outputs are explained and traceable to inputs.
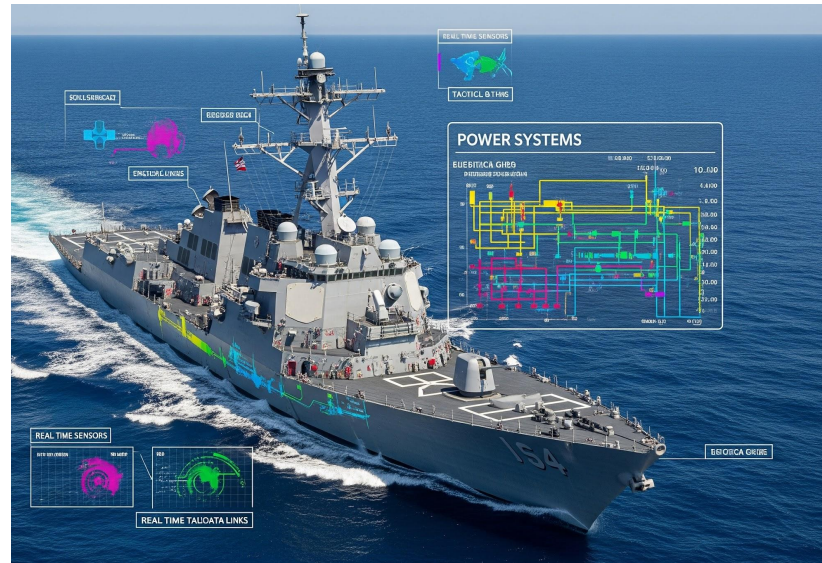
Accelerate your engineering process. Turn complex signal data into operational advantage. Ask us how you can adopt this AI in your own project!

📞 (408) 461-9826

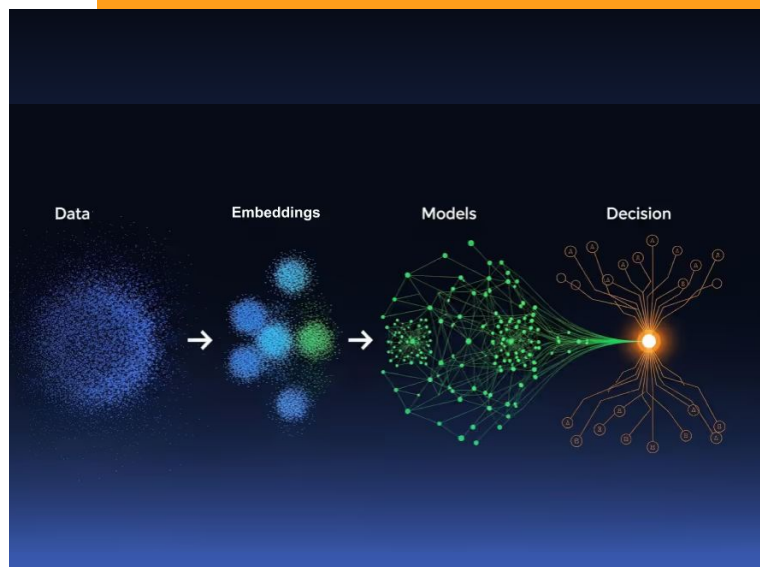✉ info@falkonry.com   🌐 falkonry.com

The only machine learning tool to analyze trillions of sensor data points

Data → Embeddings → Models → Decision

Proven in Navy Programs

★ Supported **Office of Naval Research** efforts to evaluate continuous autonomous operation of diesel generators for unmanned platforms

★ Applied Falkonry's **PatternIQ™ technology** to real Navy power data, enabling rapid identification of anomalies during long-duration trials

★ Delivered insights improving test efficiency, highlighting early equipment degradation, and informing system design choices

Benefits to the Navy

• **Capture correct data through early data generation problem identification**

• **Analyze data in real-time and at scale without the need for data engineering**

• Skip months of coding and debugging in Matlab and Python

• Faster time to information for warfighter decision makers

• Better data sharing across analytics team

How Falkonry Works

• **Automated Analysis:** Converts raw signals into actionable insights with no need for data or feature engineering

• **Unsupervised Detection:** Identifies "unknown unknowns" without requiring labeled training data

• **Scalable Deployment:** Operates cloud-native, air-gapped, or at the edge for Navy environments

• **High Data Rate Ready:** Scales to multi-kHz signal streams for advanced power system monitoring

• **Powerful Visualization:** Provides an intuitive presentation layer for signal data, with user-configurable signal hierarchies and a flexible reporting framework

• **Intuitive, no-code tools for engineers:** All mechanical and electrical engineers can benefit from advanced analytics

About Falkonry

• **Founded in 2012** with headquarters in Cupertino, CA

• **Sole-source justified** provider of **commercially validated,** patented, specialized machine learning technology for sensor data

• **Trusted by defense and industry** for monitoring critical physical systems

• **Trusted Partner:** In-Q-Tel portfolio company, AFWERX STRATFI participant, active with the US Navy and the US Intelligence Community

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