



How well will your human workers and AI team together?

Interaction and Collaboration Analytics

Advancing Human-AI Teaming

Collaboration requires an iterative process of communicating and working towards a common goal. Yet, as intelligent machines enter workforces, from medical settings to the military, human-only processes no longer suffice. Human-AI collaboration requires new ways of understanding how teams of humans and machines interact, and how this knowledge can be used to optimize collaboration by these hybrid teams.

To advance these new dynamics, Aptima's **Interaction and Collaboration Analytics** (ICA) are enabling human-machine teams to share, learn, grow, and collaborate to produce better, quicker, more efficient outcomes, whatever the task or mission.

Moving humans, technology, and AI forward

ICA provides human-AI teams with a shared context for their interactions and decision making. By leveraging the relevant signals and data from voice, haptics, wearables or other interfaces, these inputs and outputs can be represented to facilitate human-machine collaboration. ICA guides human-AI teams towards desired objectives by leveraging an ongoing cycle of feedback and learning.

ICA provides the foundation for human-machine collaboration by:

- **Defining robust, scalable information architectures for interaction and collaboration data**
- **Instrumenting collaboration interfaces to capture complex interactions**
- **Determining information representation to support new modalities for human-machine collaboration**
- **Enabling and enhancing feedback loops for continuous system learning over time**

Interaction and Collaboration Analytics in action

- **Enhancing the collective abilities of hybrid human-AI teams:** ICA is being used to enable hybrid teams of humans and AI to rapidly discover vulnerabilities in complex software. ICA enables team members with various skills to communicate with a shared understanding, enabling them to orient and apply their respective skills to improve software analyses beyond what humans or AI can do alone.
- **Driving adaptive collaboration ecosystems at scale:** ICA uses deep contextual understanding of the interactions between individual agents to analyze, learn, and adapt collaboration for improved outcomes. These improvements can be executed at internet-scale, where thousands of users in an online collaborative ecosystem can be organized and optimized to meet shared goals.

For more information:

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A unique human-centered approach to AI

Since 1995, Aptima has combined deep expertise in how humans think, learn, and perform with rigorous computational methods. Our human-centered products and solutions have improved and optimized performance in mission-critical, technology-intensive settings, solving challenges across the Department of Defense, intelligence, healthcare, and law enforcement domains.

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