

## Cognitive Augmentation Technologies

*AI sidekicks, decision support, and training to empower human operators*

As people work in and interact with increasingly complex environments, cognitive overhead increases exponentially. From aircraft maintainers, tech forecasters, and intel analysts, to parents of infants in a neonatal intensive care unit (NICU), disparate data sources, the overhead tasks of information management, and cognitive overload result in wasted effort and resources.

Aptima's **Cognitive Augmentation Technologies** (CAT) capability designs, develops, and assistive technologies that augment the cognitive performance of humans in data-intensive, mission-critical environments from military missions to healthcare. We combine a deep understanding of complex cognitive processes with design-thinking and rapid prototyping to create tools that augment socio-technical systems.

CAT's assistive technologies feature custom artificial intelligence (AI), machine learning, and interactive modalities that learn user work patterns and expectations, predict information needs for more efficient, perform insightful problem solving, enhance situational awareness and decision support, and allocate tasks for optimal workflow and human-machine collaboration.

### Defense

From the millions of complex attack and response simulations run for ballistic missile defense, CAT helps defense analysts correlate patterns and visualize data to understand real-world defense gaps and those due to simulation models.

### Intel

For analysts parsing terabytes of data to answer critical questions, CAT's contextually-aware searches narrow down and identify key information by orders of magnitude, saving analysts innumerable hours and steps.

### Healthcare

ICU patients and families often face anxiety, uncertainty, and limited healthcare knowledge. CAT develops healthcare apps that facilitate information flow and understanding amongst patients, families, and clinical support teams to improve communications and quality of care.

For more information, please contact: Mary Freiman | Tel. 781-496-2360 | [mfreiman@aptima.com](mailto:mfreiman@aptima.com)