Enhanced Human Performance and Job Readiness

Will your trainees deliver on the job?

Trainees must graduate your training program ready to perform in high-stress, complex jobs.

Proven readiness to perform

Charles River Analytics' cognitive monitoring and predictive analytics help monitor, plan, and manage human performance in your training or operational program.

With our components in place, *trainees* experience and understand their future work environment

and *emerge confident* and *well prepared* in the critical skills required for their job.

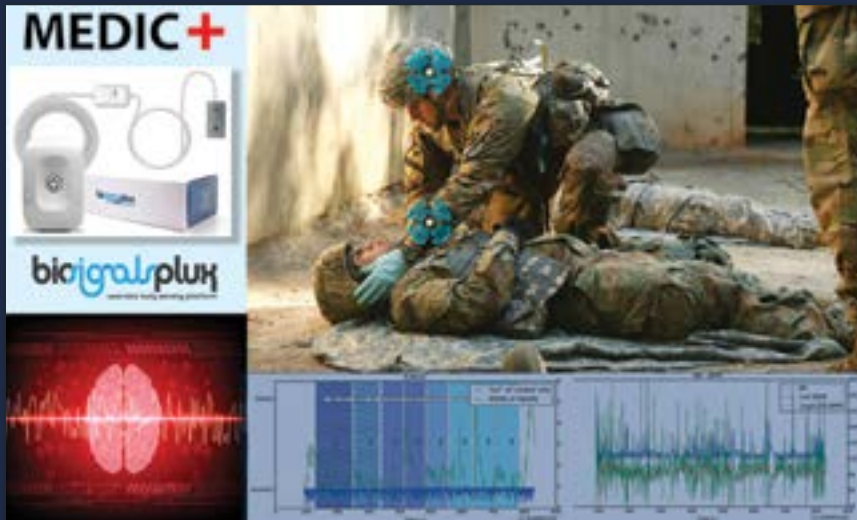*Leaders* know that a graduate will *meet the demands* of their new job, be an asset to their team…

…and **understand the impact** of the operational environment on their workforce.

Optimize human performance and readiness with cognitive monitoring and predictive analytics

Charles River Analytics offers software, hardware, and proven best practices to measure and evaluate how well a student will perform when facing the pressures that occur in their job environment.

State Assessment

Our *fNIRS Pioneer™* and *fNIRS Explorer™* sensors provide continuous qualitative and quantitative testing to identify situational pressures that can become significant problems on the job.

MEDIC uses our sensors and Sherlock™ to collect and process information about brain activity and deliver estimates of cognitive workload during high fidelity training simulations

Performance

Our Virtual Maintenance Trainer technology delivers an objective evaluation of student performance on target knowledge, skills, and tasks.

Mechanics quickly learn to maintain a fleet of UH-72A helicopters at the Western Army National Guard using the UH-72A Virtual Maintenance Trainer, built with DiSTI Corporation.

> *"...a virtual solution that could revolutionize aircraft maintenance training."*
> *– The US Air Force*

Readiness

Our ADAPTER toolkit identifies events and changes that influence individual and team performance during continuously evolving operations.
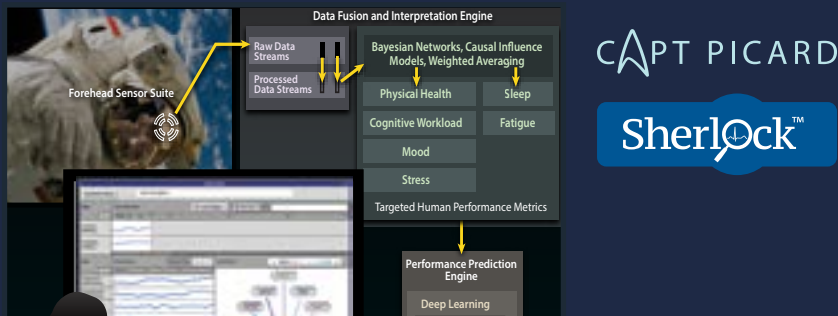

Researchers use the ADAPTER interface to fuse sensor data, model performance, and develop effective performance augmentation strategies.

Measuring astronaut's cognitive workload

Recently, **Charles River Analytics** worked with NASA to assess astronaut workload and performance during the testing and evaluation of new NASA systems. We used the measurements from our CAPT PICARD system to determine how best to display health and status on the Orien space vehicle.

CAPT PICARD can inform astronauts and Mission Control when cognitive performance begins to deteriorate, averting performance-related crises during a space mission.

CAPT PICARD is built on Sherlock™, our open and extensible software and hardware platform that provides a unified, end-to-end solution. With Sherlock, you can rapidly prototype applications to collect, analyze, visualize, and reason about human physiological, neurological, and behavioral data.

The R&D we conducted under CAPT PICARD and other cognitive workload assessment projects can also measure the training effectiveness of realistic training simulations.

To learn more about how we can work with you, email contactus@cra.com.

Charles River Analytics conducts cutting-edge AI, robotics, and human-machine interface R&D to create custom solutions for your organization. Our customer-centric focus directs us towards problems that matter, and our passion for science and engineering drives us to create actionable, impactful solutions.

We were founded in 1983 to perform results-focused research for the US government. We became an employee-owned company in 2012, setting the stage for the next generation of innovation, service, and growth. Today, our over 200 employees make a difference for a "who's who" in government and industry by delivering results on government programs and working with commercial partners.

We come to work every day because we want to advance technology to solve today's hardest problems. Our track record speaks for itself—our implemented solutions enrich the diverse markets of defense, intelligence, medical technology, training, transportation, space, and cyber security. We owe our success to our expertise in advanced algorithms, machine learning, autonomous systems, advanced human-system interfaces, agile software and hardware engineering, and to our enduring base of knowledgeable customers.

At **Charles River Analytics**, we turn research into results.

U.S. Prime Contractor

Employee-Owned Small Business

charles river analytics

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