



# UNIQUE QUALIFICATIONS AND CAPABILITIES

### Team of scientists and engineers includes specialized expertise in:

- Intelligence collection, analysis, and production
- Cognitive science and cognitive neuroscience research
- Data science and machine learning
- Mathematics and statistics, including advanced multivariate techniques
- Signal processing (communications, image/video, EEG/ERP, fMRI)

### Capabilities we have applied:

- Data collection and analysis from a variety of sensors, including neural imaging, EEG, and eye tracking
- Human subject research using IC analysts working "real" problems
- Analytic testbed development that records behaviors and decisions

### RELEVANT RESEARCH AREAS

#### **General:**

- Mental processes involved in reasoning, decision-making, and memory
- Use behavioral measurements, cognitive interventions, and neuroimaging techniques
- Effects of language on both conscious and preconscious cognitive processing
- Development and assessment of cognitive rehabilitation programs

#### **Specific:**

- Cognitive factors in intelligence analysis
  - Individual cognitive traits and tendencies
  - Cognitive disfluency
  - Heuristics, fallacies, and biases
  - Confidence / overconfidence
- Creating innovative ways to assess reasoning
- "Internet of Things" approach to improving cognition with wearable EEG

## <u>CAPABILITIES SOUGHT / TEAMMATES WANTED</u>

- Physiology
- Modeling and simulation
- Data Privacy

## TEAM KEY PERSONNEL