



## WINNING PROPOSAL

Enabling Rapid Human Knowledge Encoding via Feature-based Neurotechnology

DARPA Grant  
Awarded in Spring 2020

## GRANT WINNER

Omar Claflin, MD Ph.D.  
Cognitive Training & Machine Learning

“Polyplexus granted us a way to find a solution to an ill-defined and complex space, and ultimately find relevant seed funding from DARPA and ARL.”

## HOW

### Collaborating Across Areas of Expertise and Institutions

Involved 27 Plexors who contributed more than 70 Evidence and Conjecture  $\mu$ Pubs to the discussion

Combined perception and cognitive processes, learning theory, neurotechnology and signal processing to formulate a robust research hypothesis



## WHAT

### Disrupting the Status Quo

- Leverages read-out feature-based processing layers (FPLs) of the human visual system, using cheap non-invasive consumer-grade technology
- Features advanced true human-machine coupled learning applications by decoding perception and cognitive processes
- Leads to development of a Rapid Neurotechnology-Assisted Learning proof-of-concept system

## WHY

### Powering Research Sponsors

Benefits DARPA research in:

- Human-machine learning
- Cognition
- Defense applications of neurotechnology