

## FY22/23 DAGSI Research Topic

1. **Research Title:** Symbols to describe AI systems
2. **Individual Sponsor:**

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3. **Academic Area/Field and Education Level**

Electrical Engineering (MS or PhD level)  
Computer Science (MS or PhD level)  
Biomedical, Industrial and Human Factors Engineering (MS or PhD level)  
Fine arts (MS or PhD Level)

4. **Objectives:** Develop symbols to explain AI systems
5. **Description:** As autonomous systems and artificial intelligence (AI) components are developed, confusion often abounds about what these components are and do during operations. Often this is a result of semantics, e.g., AI can colloquially refer to complex machine intelligence or relatively constrained machine learning (ML) algorithms, and valuable energy is wasted with respect to trying to communicate what any given system actually does and how it differs from other systems. This work aims to leverage considerable knowledge from the field of technical graphics to create a lexicon of simple graphic images that can effectively communicate types of AI components and how they permit AI agents to act autonomously. Our purpose is to facilitate communication among diverse stake holders with respect to AI capabilities and its functional components.
6. **Research Classification/Restrictions:** unclassified
7. **Eligible Research Institutions:** Ohio State, Shawnee State University, Wright State, Ohio University, University of Cincinnati

**PA Approval #** AFRL-2021-2590