Department of the Navy SBIR/STTR Transition Program
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NAVSEA #2025-053

Topic # N23A-T014
Human Automation Teaming for Efficient Knowledge Extraction and Test Generation
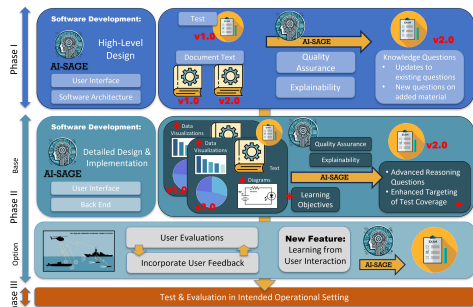Barron Associates, Inc.

WHO

SYSCOM: NAVSEA

Sponsoring Program: PEO IWS

Transition Target: SQQ-89, SWFTS, USW-DSS

TPOC: (757) 810-4898

Other Transition Opportunities: Training organizations throughout DOD including the Navy Surface Combat Systems Training Command, the Submarine Learning Center, and other organizations with the Naval Education and Training Command; the Naval Air Warfare Center Training Systems Division; the U.S. Army Training and Doctrine Command; and the U.S. Air Force Air Education and Training Command

Notes: The AI-SAGE software tool is designed to allow human users to effectively team with AI to efficiently generate and update training materials. It emphasizes explainability of AI through an explicit decomposition of the process that provides visibility into key intermediate steps, and includes extensive automated quality assurance to maximize the accuracy of outputs while minimizing human labor.

Barron Associates, Inc.

WHAT

Operational Need and Improvement: Military systems including those used in USW operations are frequently updated, necessitating updated training materials. Preparation of those training materials is currently time consuming, and there is a need to speed development of training materials to enable rapid deployment of new technologies.

Specifications Required:
Significantly reduce man hours required for generation of updating training material
Achieve very high accuracy to ensure correctness of training

Technology Developed: The AI-SAGE technology will facilitate effective human-automation teaming with advanced natural language processing to automate the process of generating and updating training materials corresponding to new and updated systems.

Warfighter Value: AI-SAGE will facilitate safe and rapid deployment of new technologies that enhance the effectiveness of the warfighter, and free man hours for other high value tasks.

WHEN

Contract Number: N00024-25-C-T014   **Ending on:** Jan 16, 2027

Milestone	Risk Level	Measure of Success	Ending TRL	Date
AI-SAGE V0 Software Prototype	Low	Successful text processing	4	3rd QTR FY26
AI-SAGE V1 Software Prototype	Medium	Successful processing of graphical elements	5	2nd QTR FY27
AI-SAGE V2 Software Prototype	Medium	Learning based on user interaction	6	2nd QTR FY28

HOW

Projected Business Model: Direct sales of locally-hosted software solutions for DOD and other organizations with highly restrictive security requirements. Secure cloud-based solution for unclassified documents.

Company Objectives: Barron's near-term objective is to deploy the technology to support programs of record related to USW, including SQQ-89 and USW-DSS under PEO IWS (5.0), and SWFTS under PEO UWS, followed by additional customers in the Naval Education & Training Command (NETC). The longer-term objective is to reach a broader set of customers within all branches of DOD as well as other federal agencies including DOT (including FAA), DHS, DOE, and DOJ. The initial focus is on safety-critical systems for which the high accuracy of the proposed technology is essential.

Potential Commercial Applications: With increasingly complex technology deployed in a huge variety of domains, and with software updates common in many systems, the need for training and training updates is vast. AI-SAGE will improve the efficiency of training development in applications ranging from transportation (e.g., emerging air vehicles, increasingly automated ground vehicles) to infrastructure, IT, cybersecurity, and factory automation.

Contact: Alec Bateman, Technical Director
bateman@barron-associates.com   (434) 973-1215 x128