USD(R&E)

Artificial Intelligence and Future Analytic Tools Improve Discovery

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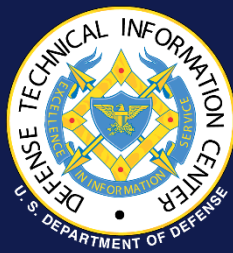NDIA Emerging Technologies Conference
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[AUTHOR: See DoDI 5230.24 for applicable distribution statement. Following is an example.] Distribution Statement C: Distribution authorized to U.S. Government agencies and their contractors (reason) (date of determination). Other requests for this document shall be referred to (controlling DoD office).
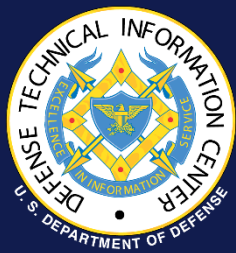
About DTIC

- Report to Assistant Secretary of Defense for Research & Engineering for Science & Technology

- Located at Ft. Belvoir

- Over 4.8M records dating back over 80 years

- Resource to all DoD users: Available to DoD and Federal CAC/PIV holders, contractors, industry partners, and academics

- Single DoD central repository of research. Sharing results reduces costs, speeds fielding of new capability, and increases the ROI of the $18B annual funding for S&T – providing the foundation for scientific advancement, collaboration, and decision making

- Matching the requirements community with problem solvers and innovators to ensure that in near peer competition our military is first to field new systems and advanced technologies to deter and, if necessary, defeat our adversaries

- Submit your research results to DTIC!

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Increasing the ROI of Defense Research with Emerging Technologies

Outcomes

Expanding understanding and enhancing analysis

- Infuse DTIC tools with AI/ML to speed analysis and understanding

Track science over time

- Tag material and find connections, speed discovery
- Categorize research as technology, and then capability
- Use generative AI to augment/substitute for SMEs
- Not expose to competitors/adversaries outside DoD

Generative AI to expand the imagination of possibilities

- Water to start a fire? Maybe not so crazy if you can trace the science…
- Tracking transition and demonstrating ROI

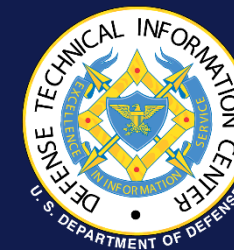***Increasing partnerships and collaboration***

Can AI/ML Deliver…

- Graphical search built on a machine learning algorithm that maps and displays relationships across data
  - Learns from usage
  - Enables Subject mater experts to train in hours
- Analysis of S&T collections to support decision-makers and open possibilities for researchers
- Visualization and static analysis tools, moving to dynamic analysis
- Citation tracing
- Categorization tagging
- Technology matching
- Technical maturity modeling
- Large language models exploring DoD S&T
- Quality of results will be impacted by access to subject matter experts to train
- Blockchain

Accelerating Delivery of Capability to the Warfighter

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