
AI in Healthcare— Measurements and Standards for Trustworthy AI

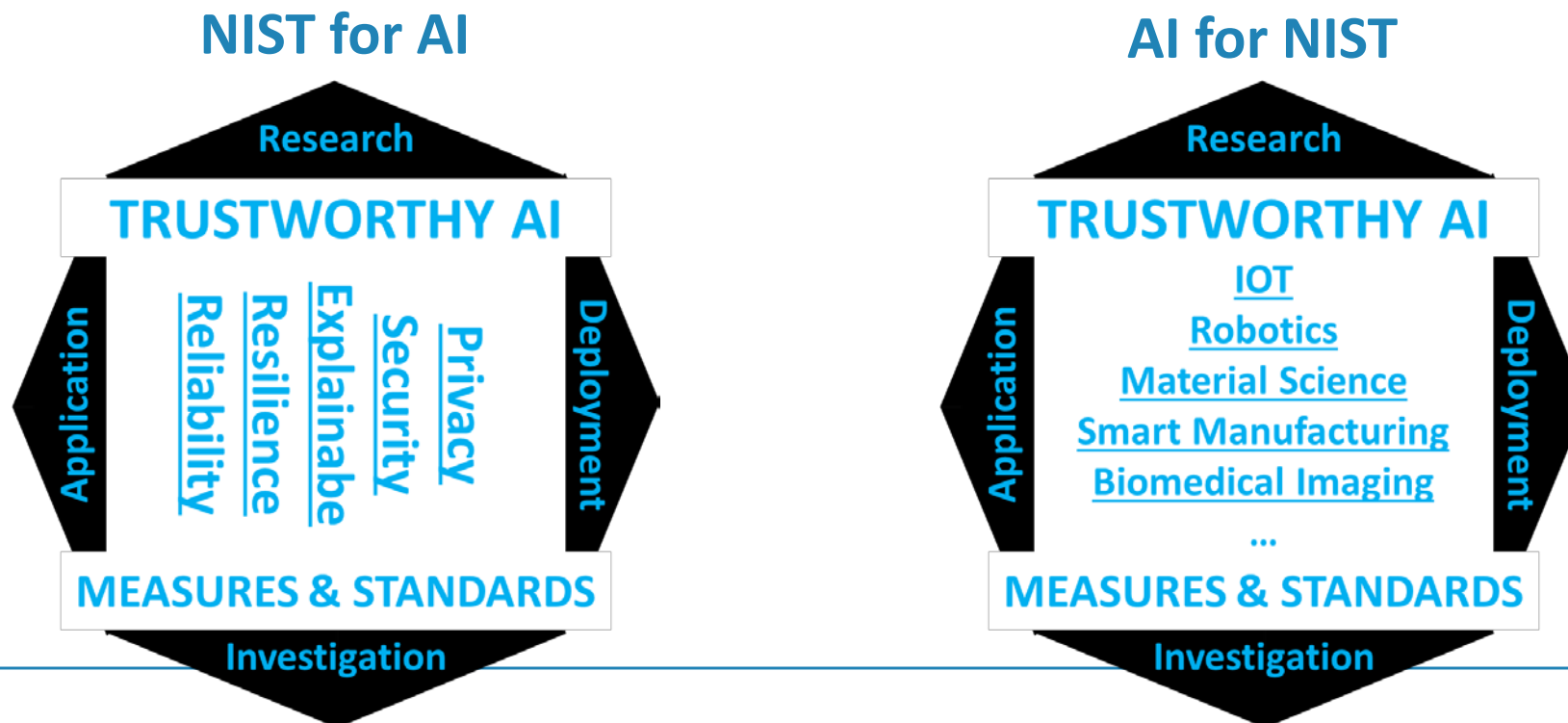
eHI Executive Advisory Roundtable on AI and ML

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NIST and AI

- NIST's Mission - To promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.



Challenges to be Addressed for Applying AI/ML in Healthcare

- Large, high-quality, multi-institutional standards-based training data sets
- Built-in algorithm explainability to convey an understanding of the bases for decisions and assessments
- Standardized methods for performance evaluation and validation
- Data exchange and representation standards – EHR interoperability/accuracy
- Acceptable data privacy and security protections to enable comprehensive data exchange for patient care and to support AI R&D
- Potential role of synthetic (phantom-like) data for ML training and performance evaluation
- Overcoming the barrier of perceived data ownership

Diagnostic Cockpit of the Future

- An integrated data platform concept promoted by the Academy for Radiology & Biomedical Imaging Research, its members, and NIST
- Focused around advanced imaging technology, aims to address the challenges already noted and the effective use of AI/ML
- Seeks to leverage and augment existing standards
- Aims to create “an environment that facilitates continued cooperation and participation across government agencies, industries, and academia in a safe, neutral, pre-competitive space”
- Addresses data summarization, visualization, and overall clinician usability
- Potential for advancement through community challenge problems

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