NLM Funded Research Projects Involving Text Mining/NLP

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2017 BioCreative VI Workshop Funding Stakeholders Panel

United States
National Library of Medicine
National Institutes of Health

NLM Grant Programs in Biomedical Informatics and Data Science

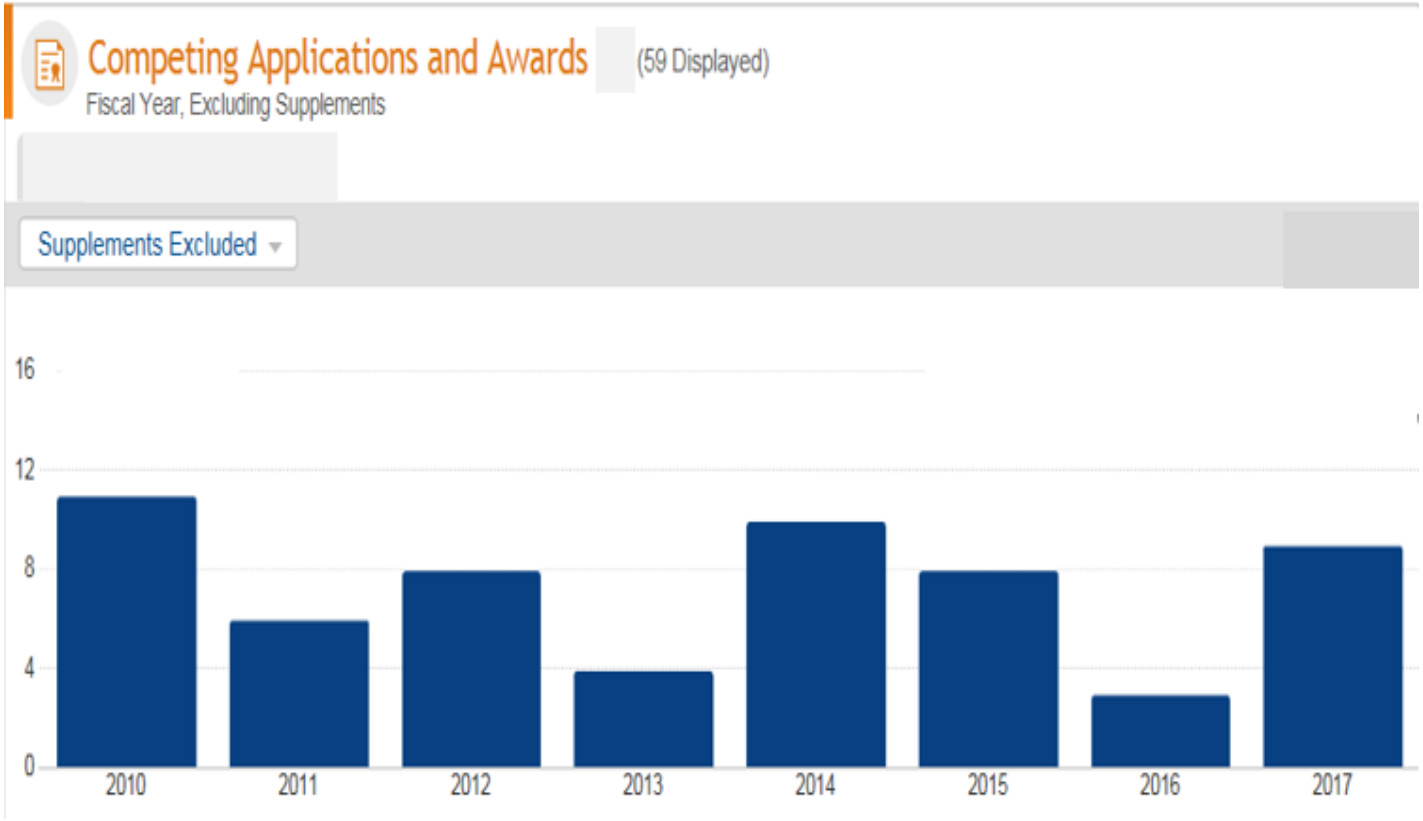
Broad scope and interdisciplinary

Application domains of health and biomedicine

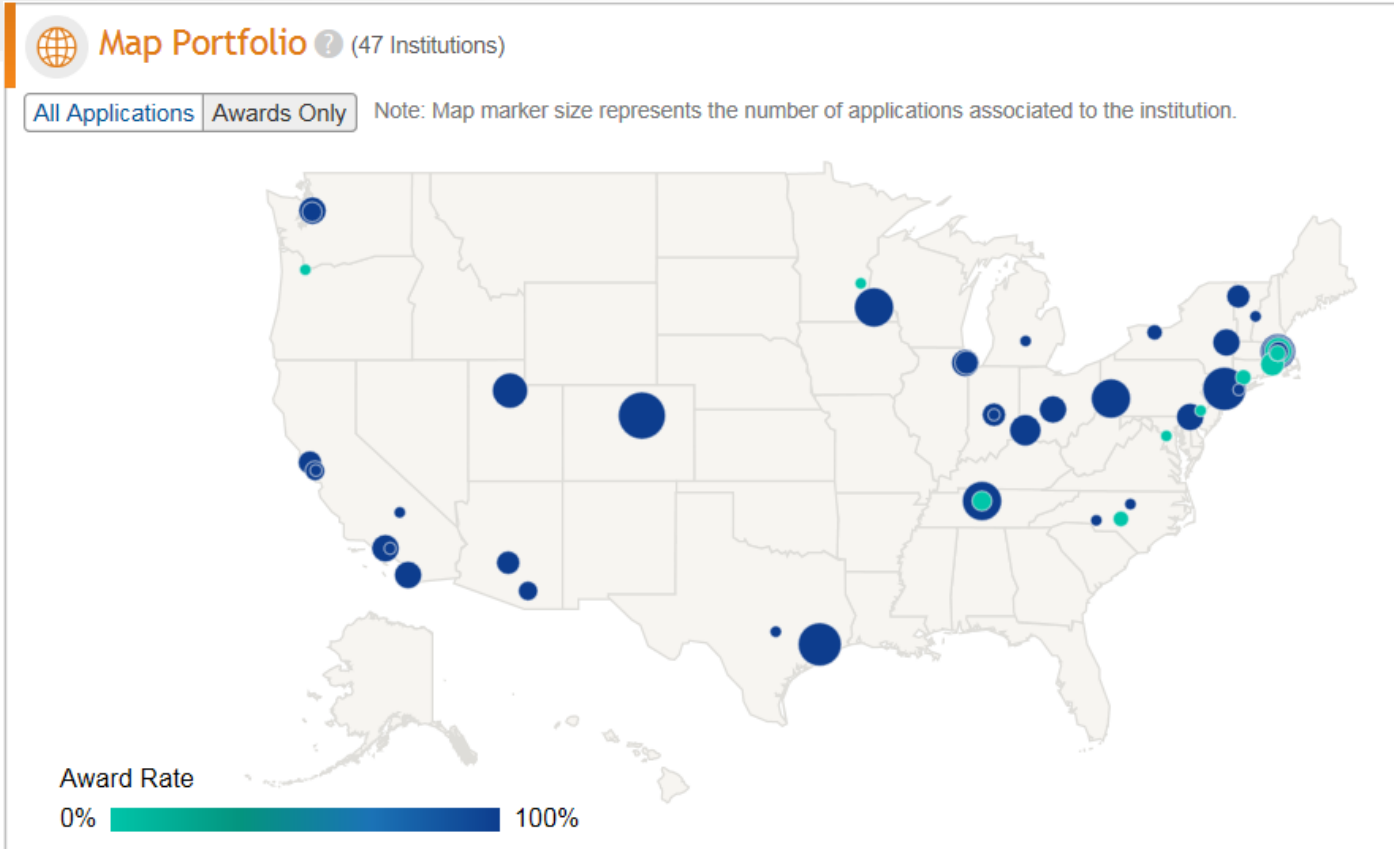
Research areas

- Information & knowledge processing, including understanding, translation, summarization of natural language
- Integration of large data sets and/or heterogeneous data types to support discovery, learning and health care
- Advanced information retrieval, knowledge discovery
- Models of complex data, simulations, information visualization and presentation approaches
- Innovative approaches for ensuring accuracy, privacy and security of clinical and biomedical research data

NLM Funded Grants 2010-2017 Involving Text Mining/NLP



Map Portfolio



Application Areas of Grants involving Text Mining/NLP

Example Grants Involving Text Mining/NLP in Clinical and Public Health Informatics

Interactive Machine Learning Methods for Clinical Natural Language Processing
University of Texas Hlth Sci Ctr Houston

Pharmacovigilance Methods: Leveraging Heterogeneous Adverse Drug Reaction Data
Columbia University Health Sciences

Interactive Search and Review of Clinical Records with Multi-layered Semantic Annotation
University of Pittsburgh at Pittsburgh

Temporal Relation Discovery for Clinical Text
Children's Hospital Corporation

A Framework to Enhance Decision Support by Invoking NLP: Methods and Applications
Massachusetts General Hospital

Bio Text NLP
University of Colorado Denver

Example Grants Involving Text Mining/NLP in Bioinformatics and Translational Informatics

Ontology-Driven Methods for Knowledge Acquisition and Knowledge Discovery
University of Pittsburgh at Pittsburgh

Text Mining for High-Fidelity Curation and Discovery of Gene-Drug-Phenotype Relationships
Stanford University

From GWAS to PHEWAS: Scanning the EMR Phenome for Gene-Disease Associations
Vanderbilt University Medical Center

Evidence Extraction Systems for The Molecular Interaction Literature
University of Southern California

Heuristics to Evaluate Biomedical and Genomic Knowledge Bases for Validity
Cold Spring Harbor Laboratory

Developing and Applying Information Extraction Resources and Technology to Create
University of Colorado Denver

Text Mining Pipeline to Accelerate Systematic Reviews in Evidence-Based Medicine
University of Illinois at Chicago

Example Grants Involving Text Mining/NLP in Consumer Health Informatics and Information Sciences

Mining Social Network Postings for Mentions of Potential Adverse Drug Reactions
Arizona State University - Tempe Campus

Evidence-Based Strategy and Tool to Simplify Text for Patients and Consumers
University of Arizona

Semi-Structured Information Retrieval in Clinical Text for Cohort Identification
Mayo Clinic Rochester

Evidence-based Drug-interaction Discovery: In-Vivo, In-Vitro and Clinical
Indiana Univ-Purdue Univ at Indianapolis

From Syntactic Relations to Semantic Predications: Porting Open Information Extraction to Biomedicine
University of Kentucky

Natural Language Question Understanding for Electronic Health Records
University of Texas Hlth Sci Ctr Houston

BD2K Enhancing the Efficiency and Effectiveness of Digital Curation for Biomedical Big Data (U01) (RFA-LM-17-001)

Crowd-Assisted Deep Learning Digital Curation to Translate Big Data into Precision Medicine

University of California, San Francisco

Unifying Templates, Ontologies, and Tools to Achieve Effective Annotation of Bioassay Protocols

University of Miami School of Medicine

Streamlined Capture and Curation of Unpublished Data

California Institute of Technology

Request for Information (RFI): Next-Generation Data Science Challenges in Health and Biomedicine

(Notice Number: NOT-LM-17-006)

NLM requests information on the three focal areas:

- Promising directions for new data science research in the context of health and biomedicine
- Promising directions for new initiatives relating to open science and research reproducibility
- Promising directions for workforce development and new partnerships

Response Date: November 1, 2017