AITC ANNUAL NATIONAL RESEARCH AWARD COMPETITION · AITC-ARA-27-001

Keyword List

108 keywords in 8 content areas, as they appear in the AITC Grant Platform

12

Maximum keywords per LOI or Full Application. Fewer, well-chosen keywords match better than many.

Focus

Alzheimer's disease and related dementias (AD/ADRD) and Aging are captured by a separate focus question. You may select them, but you don't need to.

"Other"

Use sparingly. Used to update the list for future cycles.

Choose the keywords that best represent the core of your project.

Keywords identify the focus area of your project and may be used to match your LOI or Full Application with reviewers who have the right expertise. See the competition FAQ for details.

AI Methods 17 keywords

How the AI works: the computational approach at the core of the project.

• Machine Learning	• Longitudinal and Time-Series Modeling and Prediction
• Deep Learning	• Reinforcement Learning
• Foundation Models	• Federated Learning
• Large Language Models (LLMs)	• Transfer Learning and Domain Adaptation
• AI Agents	• Causal Inference
• Generative AI	• Mechanistic Modeling, Simulation and Digital Twins
• Natural Language Processing	• Edge AI and On-Device Computing
• Medical Image Analysis and Processing	• Bioinformatics
• Multimodal Learning and Data Integration	

Technology Domains 20 keywords

The technology, data source, or tool the project builds on or delivers.

• Wearables and Biosensors	• Electroencephalography
• Ambient and Smart Home Sensing	• Gait and Mobility Sensing
• Mobile and Web-Based Health Platforms	• Speech, Voice, and Language Analysis
• Robotics and Embodied AI	• Digital Biomarkers
• Smart Glasses and Extended Reality (AR/VR)	• Digital Cognitive Assessment
• Assistive Technology	• EHR and Claims Data
• Virtual Assistants and Conversational Agents	• Telehealth and Remote Monitoring
• Clinical Decision Support	• Care Coordination and Navigation Tools
• Neuromodulation and Non-Invasive Brain Stimulation	• Coaching and Digital Therapeutics
• Neuroimaging Analysis	• Cognitive Training and Memory Support Tools

AD/ADRD and Aging Conditions 24 keywords

The condition, symptom, or aspect of aging the project addresses.

- AD/ADRD
- Aging
- Mild Cognitive Impairment (MCI)
- Cognition and Cognitive Decline
- Frontotemporal Dementia
- Lewy Body Dementia
- Vascular Contributions to Cognitive Impairment and Dementia (VCID)
- Down Syndrome-Associated AD
- Parkinson's Disease
- Delirium
- Neuropsychiatric Symptoms
- Agitation
- Mood, Depression, Anxiety
- Sleep and Circadian Rhythms
- Frailty
- Sarcopenia
- Falls
- Physical Activity and Mobility
- Functional Status and Activities of Daily Living (ADLs/IADLs)
- Multimorbidity
- Polypharmacy and Medication Management
- Cardiovascular Health
- Vision and Hearing (Sensory Function)
- Social Isolation and Engagement

Biology and Biomarkers 10 keywords

Biological measures, mechanisms, and omics.

- AD/ADRD Pathology Markers (Amyloid, Tau, Alpha-Synuclein)
- Fluid Biomarkers (Blood, CSF)
- ApoE
- Genomics
- Epigenomics
- Multi-omics
- Aging Clocks and Biological Age
- Mechanisms of Aging (Geroscience)
- Disease Subtyping and Deep Phenotyping
- Computational Drug Repurposing

Responsible and Trustworthy AI 11 keywords

Validation, fairness, safety, privacy, and governance of AI.

- Model Validation, Robustness, and Transportability
- Explainable AI
- Algorithmic Fairness and Bias Assessment
- Subgroup Performance
- Human Oversight and Human-AI Collaboration
- Post-Deployment Monitoring and Model Drift
- AI Governance, Auditing, and Safety Surveillance
- Privacy and Data Security
- Data Harmonization and AI-Ready Data
- Synthetic Data
- Ethical, Legal, and Social Implications (ELSI)

Purpose and Care Focus 13 keywords

What the project is meant to accomplish for patients, caregivers, or care.

- Early Detection, Screening, and Risk Prediction
- Diagnostics and Assessment
- Prevention
- Precision Medicine
- Intervention Design, Targeting, and Personalization
- Engagement and Adherence
- Dementia Care and Care Delivery
- Caregiving and Caregiver Support
- Caregiver and Workforce Training
- Technology-Enabled Therapeutics and Interventions
- Elder Abuse, Fraud, and Financial Exploitation
- Driving
- Quality of Life

Settings and Populations 6 keywords

Where the work takes place or whom it serves.

- Home and Community Settings
- Primary and Specialty Outpatient Care
- Hospital and Acute Care (Inpatient, ED, Care Transitions)
- Long-Term Care (Nursing Home, Assisted Living)
- Rural and Low-Connectivity Settings
- Veterans

Translation and Implementation 7 keywords

How the work moves into practice, products, or policy.

- Implementation Science and Workflow Integration
- Real-World and Pragmatic Trials
- User-Centered Design and Accessibility
- Commercialization and Technology Transfer
- Medical Device Regulatory Issues
- Cost-Effectiveness and Health Economics
- Recruitment Science