**Cluster 0:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A Multimodal Approach for Monitoring Prolonged Acute Pain in Neonates | UNIVERSITY OF SOUTH FLORIDA | R21 | 2020 | 0.38 |
| Central glutamate signaling in postoperative pain regulation - Renewal | NEW YORK UNIVERSITY SCHOOL OF MEDICINE | R01 | 2020 | 0.37 |
| Evaluation of Pain in Chronic Pancreatitis using the NAPS2 cohorts | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R21 | 2015 | 0.37 |
| fMRI-based Biomarkers for Multiple Components of Pain | UNIVERSITY OF COLORADO | R01 | 2017 | 0.37 |
| Finding Good TEMporal PostOperative pain Signatures (TEMPOS) | UNIVERSITY OF FLORIDA | R01 | 2019 | 0.37 |

**Cluster 1:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Assessing ASL CBF as a biomarker for early Alzheimer's disease detection and disease progression | UNIVERSITY OF MARYLAND BALTIMORE | R01 | 2020 | 0.25 |
| Novel Approaches to Identifying and Engaging Disadvantaged Patients with Alzheimer’s Disease (AD) in Clinical Research | UNIVERSITY OF WISCONSIN-MADISON | K76 | 2020 | 0.22 |
| Circadian Organization and Disorder in Alzheimer's Disease | UNIVERSITY OF PENNSYLVANIA | R01 | 2020 | 0.22 |
| Disparities in the Diagnosis of Alzheimer's Disease Among African American and European American Veterans | SEATTLE INST FOR BIOMEDICAL/CLINICAL RES | R56 | 2018 | 0.22 |
| Sleep and Electroencephalography Biomarkers of Alzheimer's Disease | WASHINGTON UNIVERSITY | R01 | 2020 | 0.21 |

**Cluster 2:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Gene-Gene Interactions and Their Functional Roles in Prostate Cancer Aggressiveness | LSU HEALTH SCIENCES CENTER | R21 | 2017 | 0.093 |
| Genetic & epigenetic analysis of angiogenesis genes in recurrent prostate cancer | H. LEE MOFFITT CANCER CTR & RES INST | R01 | 2012 | 0.09 |
| Predicting the Presence of Clinically Significant Prostate Cancer using Multiparametric MRI and MR-US Fusion Biopsy | UNIVERSITY OF CALIFORNIA LOS ANGELES | R21 | 2019 | 0.08 |
| MRI Imaging and Biomarkers for Early Detection of Aggressive Prostate Cancer | UNIVERSITY OF MIAMI SCHOOL OF MEDICINE | U01 | 2020 | 0.074 |
| Neural Network Prediction of Prostate Cancer Progression | UNIVERSITY OF CHICAGO | R21 | 2003 | 0.074 |

**Cluster 3:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| MobileEye OCR for the Visually Impaired | APPLIED MEDIA ANALYSIS, LLC | R43 | 2006 | 0.12 |
| Locating and Reading Informational Signs | UNIVERSITY OF CALIFORNIA LOS ANGELES | R01 | 2004 | 0.12 |
| Mid-Level Vision Systems for Low Vision | UNIVERSITY OF SOUTHERN CALIFORNIA | R01 | 2011 | 0.12 |
| Leveraging Maps and Computer Vision to Support Indoor Navigation for Blind Travelers | SMITH-KETTLEWELL EYE RESEARCH INSTITUTE | R01 | 2020 | 0.11 |
| Sign Finder: Computer Vision to Find and Read Signs | BLINDSIGHT CORPORATION | R44 | 2006 | 0.11 |

**Cluster 4:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| COMPUTATIONAL THINKING-Novel Machine Learning Approaches for Automati | NORTHEASTERN UNIVERSITY | N03 | 2010 | 0.026 |
| COMPUTATIONAL THINKING-Visual Clinical Problem Threading for Case Summarization | RUTGERS, THE STATE UNIV OF N.J. | N03 | 2010 | 0.023 |
| COMPUTTIONAL THINKING-An Evidence-Based, Open-Database Approach to Diagnostic Dec | SIMULCONSULT, INC. | N03 | 2010 | 0.023 |
| COMPUTATIONAL THINKING-Computational Abduction for Molecular Biology | UNIVERSITY OF COLORADO DENVER | N03 | 2010 | 0.022 |
| COMPUTATIONAL THINKING-Evidence-Based Expert Systems to Assist in Treatment of De | SRI INTERNATIONAL | N03 | 2010 | 0.022 |

**Cluster 5:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Multi-point and multi-locus analysis of genomic association data | CASE WESTERN RESERVE UNIVERSITY | R01 | 2010 | 0.065 |
| Genome-Wide Association Analysis of Bladder Cancer | UNIVERSITY OF TX MD ANDERSON CAN CTR | U01 | 2012 | 0.058 |
| Modeling Dimensionality and Genetic Heterogeneity in Schizophrenia | UNIVERSITY OF UTAH | K01 | 2019 | 0.058 |
| International Cohort Collection for Bipolar Disorder | MASSACHUSETTS GENERAL HOSPITAL | R01 | 2012 | 0.057 |
| International Case Control Study of Malignant Glioma | BAYLOR COLLEGE OF MEDICINE | R01 | 2015 | 0.055 |

**Cluster 6:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Structure based prediction of the interactome | MASSACHUSETTS INSTITUTE OF TECHNOLOGY | R01 | 2015 | 0.1 |
| Natural Product-Drug Interaction Research: The Roadmap to Best Practices | WASHINGTON STATE UNIVERSITY | U54 | 2019 | 0.079 |
| Computational Explorations of Unconventional Approaches to Control Noncovalent Interactions | UNIVERSITY OF HOUSTON | R35 | 2020 | 0.062 |
| Computational models for the signaling of tumor necrosis factor receptor on cell surfaces | ALBERT EINSTEIN COLLEGE OF MEDICINE | R01 | 2020 | 0.055 |
| Structure based Prediction of the interactome | MASSACHUSETTS INSTITUTE OF TECHNOLOGY | R01 | 2020 | 0.05 |

**Cluster 7:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Dynamic Brain Mechanisms of Proactive and Reactive Control in Childhood ADHD | STANFORD UNIVERSITY | K01 | 2018 | 0.15 |
| Biological and Information Processing Mechanisms Underlying Autism | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | P50 | 2011 | 0.15 |
| Investigating Brain Connectivity in Autism at the Whole-Brain Level | INDIANA UNIVERSITY BLOOMINGTON | R00 | 2014 | 0.14 |
| Neuroanatomical markers of persistence versus remission of ADHD | NEW JERSEY INSTITUTE OF TECHNOLOGY | R03 | 2017 | 0.14 |
| Characterizing mechanistic heterogeneity across ADHD and Autism | OREGON HEALTH & SCIENCE UNIVERSITY | R01 | 2018 | 0.13 |

**Cluster 8:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A BRAIN Initiative Resource: The Neuroscience Multi-omic Data Archive | UNIVERSITY OF MARYLAND BALTIMORE | R24 | 2020 | 0.083 |
| BRAIN INITIATIVE RESOURCE: DEVELOPMENT OF A HUMAN NEUROELECTROMAGNETIC DATA ARCHIVE AND TOOLS RESOURCE (NEMAR) | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R24 | 2020 | 0.074 |
| EEGLAB: Software for Analysis of Human Brain Dynamics | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2020 | 0.073 |
| Enabling Shared Analysis and Processing of Large Neurophysiology Data | KITWARE, INC. | R44 | 2018 | 0.068 |
| Axonal connectomics: dense mapping of projection patterns between cortical areas | ALLEN INSTITUTE | RF1 | 2019 | 0.068 |

**Cluster 9:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Computational methods for modeling lineage-specific gene regulation | STANFORD UNIVERSITY | R01 | 2016 | 0.14 |
| CHARTING THE EPIGENOMIC LANDSCAPE OF HUMAN TRANSPOSABLE ELEMENTS | WASHINGTON UNIVERSITY | R01 | 2015 | 0.11 |
| Comparative analysis and regulatory architecture of epigenomics datasets | MASSACHUSETTS INSTITUTE OF TECHNOLOGY | R01 | 2017 | 0.1 |
| Integrative analysis tools to dissect cell-type specific transcriptional programs | SLOAN-KETTERING INST CAN RESEARCH | R01 | 2014 | 0.1 |
| Methods for analysis of regulatory variation in cellular differentiation | JOHNS HOPKINS UNIVERSITY | R01 | 2019 | 0.1 |

**Cluster 10:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Quantitative Parenchyma Descriptor as an Imaging Biomarker of Breast Cancer Risk | UNIVERSITY OF MICHIGAN AT ANN ARBOR | U01 | 2019 | 0.25 |
| A Noninvasive, Precision Medicine Approach to Improve Breast Cancer Screening Using Cell-free RNA from Saliva. | PRIME GENOMICS, INC. | R43 | 2019 | 0.25 |
| Informatics Techniques to Optimize Mammography for Aging Populations | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2016 | 0.24 |
| Background parenchymal uptake (BPU) on molecular breast imaging as a novel breast cancer risk factor | MAYO CLINIC ROCHESTER | R21 | 2016 | 0.24 |
| Breast Cancer Risk Stratification with Resonant Electrical Impedance Spectroscopy | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R33 | 2010 | 0.22 |

**Cluster 11:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Natural language processing for clinical and translational research | MAYO CLINIC ROCHESTER | R01 | 2016 | 0.089 |
| Annotation, development and evaluation for clinical information extraction (transfer) | BOSTON CHILDREN'S HOSPITAL | R01 | 2013 | 0.081 |
| Annotation, development and evaluation for clinical information extraction | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2013 | 0.081 |
| Extended Methods and Software Development for Health NLP | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2019 | 0.074 |
| Investigating the generalizability of natural language processing of EMR data | KAISER FOUNDATION RESEARCH INSTITUTE | R21 | 2009 | 0.07 |

**Cluster 12:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Using Big Data to Understand Sepsis in an Immunocompromised Population | UNIVERSITY OF WASHINGTON | F31 | 2020 | 0.35 |
| Enhancing an EMR-Based Real-Time Sepsis Alert System Performance through Machine Learning | WAYNE STATE UNIVERSITY | R21 | 2017 | 0.35 |
| Sepsis Early Prediction and Subphenotype Illumination Study (SEPSIS) | UNIVERSITY OF CHICAGO | R01 | 2019 | 0.35 |
| Sepsis Early Prediction and Subphenotype Illumination Study (SEPSIS) | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2020 | 0.35 |
| Automated detection and prediction of atrial fibrillation during sepsis | BOSTON UNIVERSITY MEDICAL CAMPUS | R01 | 2020 | 0.33 |

**Cluster 13:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Using Machine Learning to Predict Problematic Prescription Opioid Use and Opioid Overdose | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2019 | 0.25 |
| iTransform: Wearable Biosensors to Detect the Evolution of Opioid Tolerance in Opioid Naïve Individuals | UNIV OF MASSACHUSETTS MED SCH WORCESTER | K23 | 2020 | 0.23 |
| THE PRIMARY OBJECTIVE OF THE PROPOSED PHASE I WORK IS TO FURTHER DEVELOP A PROOF-OF-CONCEPT (POC) MACHINE LEARNING APPROACH TO DETECT ILLEGAL OPIOID SELLERS AND DEVELOP IT INTO AN MVP THAT CAN COLLEC | S-3 RESEARCH, LLC | N43 | 2019 | 0.23 |
| Real-time fMRI neurofeedback of large-scale network dynamics in opioid use disorder | YALE UNIVERSITY | R21 | 2020 | 0.22 |
| Telemedicine for Treatment of Opioid Use Disorder | HARVARD MEDICAL SCHOOL | R01 | 2020 | 0.21 |

**Cluster 14:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Advancing Physical Activity Measurement Using Pattern Recognition Techniques | UNIVERSITY OF MASSACHUSETTS AMHERST | RC1 | 2010 | 0.24 |
| PAGES: Physical Activity Genomics, Epigenomics/transcriptomics Site | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | U24 | 2020 | 0.21 |
| An Intelligent Physical Activity Monitor | CREARE, INC. | R43 | 2006 | 0.21 |
| Novel Models to Predict Energy Expenditure and Physical Activity in Preschoolers | BAYLOR COLLEGE OF MEDICINE | R01 | 2013 | 0.2 |
| Novel Analytic Techniques to Assess Physical Activity | UNIVERSITY OF MASSACHUSETTS AMHERST | R01 | 2010 | 0.2 |

**Cluster 15:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Simultaneous imaging of myocardial blood flow and glucose metabolism using dynamic 18F-FDG PET | UNIVERSITY OF CALIFORNIA AT DAVIS | R21 | 2017 | 0.051 |
| Multi-modal and Extreme PET/MRI Reconstruction Methods | UNIVERSITY OF CALIFORNIA, SAN FRANCISCO | F32 | 2020 | 0.049 |
| Kernel-based Nonlinear Learning for Fast Magnetic Resonance Imaging with Sub-Nyquist Sampling | STATE UNIVERSITY OF NEW YORK AT BUFFALO | R21 | 2016 | 0.048 |
| Improved Techniques for Substitute CT Generation from MRI datasets | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2020 | 0.045 |
| Probing Dose Limits in Cardiac SPECT with Reconstruction and Personalized Imaging | ILLINOIS INSTITUTE OF TECHNOLOGY | R01 | 2018 | 0.042 |

**Cluster 16:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Identifying Risk Factors for Antibiotic Resistance via Integration of Epidemiology and Metagenomics | UNIVERSITY OF TX MD ANDERSON CAN CTR | K01 | 2020 | 0.1 |
| Systems Biology of Microbiome-mediated Resilience to Antibiotic-resistant Pathogens | SLOAN-KETTERING INST CAN RESEARCH | U01 | 2020 | 0.091 |
| Integrated Microbial Screening and Antimicrobial Susceptibility Test on Microfluidic Digital Array for Diagnosis of Urinary Tract Infections | COMBINATI, INC. | R41 | 2019 | 0.075 |
| FAST platform for same-shift, complete antibiotic menu antibiotic susceptibility testing | SELUX DIAGNOSTICS, INC. | R43 | 2018 | 0.066 |
| Host-derived biomarker signatures to differentiate acute viral, bacterial, and fungal infection | DUKE UNIVERSITY | R21 | 2018 | 0.064 |

**Cluster 17:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Neuromodulatory control of collective circuit dynamics in C. elegans | MASSACHUSETTS INSTITUTE OF TECHNOLOGY | R01 | 2020 | 0.081 |
| Modeling a neural circuit for flexible control of innate behaviors | CALIFORNIA INSTITUTE OF TECHNOLOGY | K99 | 2020 | 0.075 |
| Multimodal, integrated analysis of neural activity and naturalistic social behavior in freely moving mice | CALIFORNIA INSTITUTE OF TECHNOLOGY | R01 | 2020 | 0.072 |
| Input-specific imaging and manipulation of synaptic plasticity underlying social memory | MAX PLANCK FLORIDA CORPORATION | F32 | 2020 | 0.06 |
| Determining the role of amygdalostriatal transition zone circuits in associative learning and motivated behaviors | SALK INSTITUTE FOR BIOLOGICAL STUDIES | K99 | 2020 | 0.059 |

**Cluster 18:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Dissecting the mechanism of cell migration at the systems level | CARNEGIE-MELLON UNIVERSITY | R35 | 2020 | 0.14 |
| iFACS: Imaging Florescence Activated Cell Sorter to sort cells based on images | NANOCELLECT BIOMEDICAL, INC. | R44 | 2018 | 0.13 |
| Real-time computer vision tracking of stemness | CARNEGIE-MELLON UNIVERSITY | R01 | 2010 | 0.13 |
| Targeting Senescence for Biomarkers and Therapeutics | UNIVERSITY OF CALIFORNIA, SAN FRANCISCO | R01 | 2019 | 0.12 |
| Symmetry breaking and polarization of cell in 3D environments | UT SOUTHWESTERN MEDICAL CENTER | F32 | 2017 | 0.12 |

**Cluster 19:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Developing an artificial intelligence-based mHealth intervention to increase HIV testing in Malaysia | YALE UNIVERSITY | R21 | 2020 | 0.24 |
| Big Data Analysis of HIV Risk and Epidemiology in Sub-Saharan Africa | STANFORD UNIVERSITY | R01 | 2020 | 0.24 |
| Big Data analytics of HIV treatment gaps in South Carolina: Identification and prediction | UNIVERSITY OF SOUTH CAROLINA AT COLUMBIA | R01 | 2020 | 0.24 |
| Developing an Artificial Intelligence Chatbot to Promote HIV Testing | YALE UNIVERSITY | R21 | 2020 | 0.23 |
| Addressing Major HIV Prevention and Health Outcomes Questions in an Era of Universal ART: Mentoring in a Community-Randomized Trial | BRIGHAM AND WOMEN'S HOSPITAL | K24 | 2020 | 0.21 |

**Cluster 20:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| High-resolution map of human germline mutation patterns and inference of mutagenic mechanisms | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2019 | 0.14 |
| Tracing the evolution of the human mutation rate | STANFORD UNIVERSITY | F32 | 2017 | 0.11 |
| Predicting causal non-coding variants in a founder population | STANFORD UNIVERSITY | R01 | 2017 | 0.098 |
| Decrypting Variants of Uncertain Significance in Long-QT Syndrome | NORTHWESTERN UNIVERSITY AT CHICAGO | R01 | 2017 | 0.098 |
| The fitness effects of de novo structural variants | UNIVERSITY OF WASHINGTON | K99 | 2020 | 0.097 |

**Cluster 21:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Biomarker panel to differentiate stroke from stroke mimic | PREDICTION SCIENCES, LLC | R43 | 2008 | 0.3 |
| Sleep apnea after stroke: Implications for screening and treatment | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2019 | 0.29 |
| Whole Genome RNA Sequencing (RNAseq) of Blood from Patients with Lacunar Stroke | UNIVERSITY OF CALIFORNIA AT DAVIS | R01 | 2020 | 0.28 |
| Fast and Easy Assessment of Stroke | ALVA HEALTH, INC. | R43 | 2019 | 0.28 |
| Whole Transcriptome Studies of Patients with Transient Ischemic Attacks (TIAs) | UNIVERSITY OF CALIFORNIA AT DAVIS | R01 | 2020 | 0.28 |

**Cluster 22:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| 4/5 CAPER: Computerized assessment of psychosis risk | UNIVERSITY OF GEORGIA | R01 | 2020 | 0.098 |
| CAPER: Computerized Assessment of Psychosis Risk | TEMPLE UNIV OF THE COMMONWEALTH | R01 | 2020 | 0.098 |
| 2/5 CAPER Computerized assessment of psychosis risk | NORTHWESTERN UNIVERSITY | R01 | 2020 | 0.097 |
| Olfactory and facial markers of developmental risk for psychosis in 22q11 deletion syndrome | UNIVERSITY OF PENNSYLVANIA | R01 | 2020 | 0.097 |
| 1/5 CAPER: Computerized Assessment of ProdromE Risk | UNIVERSITY OF MARYLAND BALTIMORE | R01 | 2020 | 0.096 |

**Cluster 23:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Transforming Analytical Learning in the Era of Big Data | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R25 | 2020 | 0.18 |
| Administrative Supplement Request for Transforming Analytical Learning in the Era of Big Data | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R25 | 2016 | 0.17 |
| Fisk University/UIUC-Mayo KnowENG BD2K Center R25 Partnership | FISK UNIVERSITY | R25 | 2019 | 0.16 |
| Big Data Coursework for Computational Medicine | WEILL MEDICAL COLL OF CORNELL UNIV | R25 | 2016 | 0.13 |
| Summer Institute for Statistics of Big Data | UNIVERSITY OF WASHINGTON | R25 | 2016 | 0.12 |

**Cluster 24:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Protege: A Knowledge-Engineering Environment for Advancing Biomedical Sciences | STANFORD UNIVERSITY | R01 | 2020 | 0.26 |
| Protege: An Ontology-Development Platform for Biomedical Scientists | STANFORD UNIVERSITY | R01 | 2016 | 0.25 |
| Collaborative Development of Biomedical Ontologies and Terminologies | STANFORD UNIVERSITY | R01 | 2016 | 0.23 |
| Ontologies and Biomedical Language Processing | UNIVERSITY OF COLORADO DENVER | R01 | 2010 | 0.22 |
| Automated Integration of Biomedical Knowledge | BRIGHAM AND WOMEN'S HOSPITAL | R01 | 2010 | 0.22 |

**Cluster 25:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Academy of Aphasia Research and Training Symposium | BOSTON UNIVERSITY (CHARLES RIVER CAMPUS) | R13 | 2020 | 0.26 |
| Center for the Study of Aphasia Recovery (C-STAR) | UNIVERSITY OF SOUTH CAROLINA AT COLUMBIA | P50 | 2020 | 0.25 |
| Neural Correlates of Recovery from Aphasia After Stroke | VANDERBILT UNIVERSITY MEDICAL CENTER | R01 | 2020 | 0.24 |
| Transcranial Magnetic Stimulation for Aphasia: Efficacy and Neural Basis | UNIVERSITY OF PENNSYLVANIA | R01 | 2020 | 0.23 |
| Communication Bridge: A person-centered Internet-based intervention for individuals with primary progressive aphasia | NORTHWESTERN UNIVERSITY AT CHICAGO | R01 | 2020 | 0.18 |

**Cluster 26:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Understanding Real-Life Falls in Amputees using Mobile Phone Technology | REHABILITATION INSTITUTE OF CHICAGO D/B/A SHIRLEY RYAN ABILITYLAB | R01 | 2017 | 0.42 |
| A Comprehensive Fall Prevention System for Memory Care: Final Feasibility and Randomized Controlled Study | SAFELYYOU, INC. | R44 | 2020 | 0.4 |
| Fall Detection and Prevention for Memory Care through Real-Time Artificial Intelligence Applied to Video | SAFELYYOU, INC. | R44 | 2020 | 0.38 |
| Real-time video monitoring of falls in memory-care facilities for individuals with Alzheimer's and related dementias | SAFELYYOU, INC. | R43 | 2017 | 0.36 |
| Just-In-Time Fall Prevention: Development of an mHealth Intervention for Persons with Multiple Sclerosis | UNIVERSITY OF VERMONT & ST AGRIC COLLEGE | R21 | 2020 | 0.34 |

**Cluster 27:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| The Molecular Pathogenesis of Health Disparities in Inf\* | NORTHSHORE UNIVERSITY HEALTHSYSTEM | R01 | 2005 | 0.06 |
| PATHOGENESIS OF HEALTH DISPARITIES IN PRETERM BIRTH | EVANSTON NORTHWESTERN HEALTHCARE RES INS | R01 | 2001 | 0.059 |
| The Nomenclature of Human and Vertebrate Genes | EUROPEAN MOLECULAR BIOLOGY LABORATORY | U24 | 2020 | 0.057 |
| A web-based craniofacial disease gene discovery tool | UNIVERSITY OF DELAWARE | R03 | 2016 | 0.054 |
| Point Impact and Sparsity in Functional Data Analysis. | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2014 | 0.053 |

**Cluster 28:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Spinal Epidural Electrode Array To Facilitate Standing and Stepping After SCI | UNIVERSITY OF CALIFORNIA LOS ANGELES | U01 | 2018 | 0.1 |
| Restoring arm and hand motor function with non-invasive spinal stimulation. | NEUROENABLING TECHNOLOGIES, INC. | R43 | 2013 | 0.096 |
| A Theranostic Tool to Assess and Enable Spared Spinal Motor Function After SCI | NEUROENABLING TECHNOLOGIES, INC. | R43 | 2014 | 0.096 |
| Spinal Epidural Electrode Array to Facilitate Standing and Stepping After SCI | UNIVERSITY OF CALIFORNIA LOS ANGELES | R01 | 2012 | 0.089 |
| Enabling forelimb function with agonist drug and epidural stimulation in SCI | UNIVERSITY OF CALIFORNIA LOS ANGELES | U01 | 2017 | 0.085 |

**Cluster 29:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Visant-Predictome: A System for Integration, Mining Visualization and Analysis | BOSTON UNIVERSITY (CHARLES RIVER CAMPUS) | R01 | 2009 | 0.02 |
| BioMediator: Biologic Data Integration& Analysis System | UNIVERSITY OF WASHINGTON | R01 | 2005 | 0.017 |
| BioMediator: Biologic Data Integration & Analysis System | UNIVERSITY OF WASHINGTON | R01 | 2003 | 0.017 |
| CSHL Computational and Comparative Genomics Course | COLD SPRING HARBOR LABORATORY | R25 | 2019 | 0.016 |
| Development of Bioinformatic Tools for Virtual Cloning | VIRMATICS, LLC | R44 | 2005 | 0.016 |

**Cluster 30:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Speech Prosody and Articulatory Dynamics in Spoken Language | UNIVERSITY OF SOUTHERN CALIFORNIA | R01 | 2016 | 0.3 |
| Objectively Quantifying Speech Outcomes of Children with Cleft Palate | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | R21 | 2019 | 0.26 |
| Perception of dysarthric speech: An objective model of dysarthric speech evaluation with actionable outcomes | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | R01 | 2020 | 0.26 |
| Functional Architecture of Speech Motor Cortex | UNIVERSITY OF CALIFORNIA, SAN FRANCISCO | U01 | 2018 | 0.26 |
| A Direct Brain to Speech Generator for use in Humans | NEURAL SIGNALS, INC. | R44 | 2009 | 0.26 |

**Cluster 31:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| An Integrative Approach to Drug Repositioning Using Decision Tree Based Machine Learning | WEILL MEDICAL COLL OF CORNELL UNIV | F31 | 2020 | 0.14 |
| A systems analysis of drug tolerance in Mycobacterium tuberculosis | INSTITUTE FOR SYSTEMS BIOLOGY | R01 | 2020 | 0.13 |
| Predicting Drug Cardiotoxicity Targets Using iPSC-Derived Cardiomyocytes and Machine Learning | CORNELL UNIVERSITY | F31 | 2020 | 0.12 |
| An integrative multi-phenotype pipeline for drug evaluation, pharmacogenomics, and attribute prediction | PHENVOGEN, LLC | R41 | 2017 | 0.12 |
| Novel computational approaches to predict drug response and combination effects | UT SOUTHWESTERN MEDICAL CENTER | R35 | 2020 | 0.11 |

**Cluster 32:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Web-based App to Alleviate Loneliness and Isolation in Older Adults at Home | VIGOROUS MIND, INC. | R43 | 2018 | 0.13 |
| Changes in Multimorbidity and Disability Among Race/Ethnic Older Adults (AD/ADRD-Focused Administrative Supplement) | OREGON HEALTH & SCIENCE UNIVERSITY | R01 | 2018 | 0.11 |
| A Personalized Health Behavior System to Promote Well-Being in Older Adults | WEILL MEDICAL COLL OF CORNELL UNIV | R01 | 2020 | 0.11 |
| Chronic Conditions and Mutuality of Care in Late Life Marriage:A Multi-method App | YALE UNIVERSITY | K01 | 2017 | 0.11 |
| Voice2Connect: Informing the Design of Smart Speakers for Social Connectedness in Low-Income Older Adults | VIRGINIA COMMONWEALTH UNIVERSITY | R03 | 2020 | 0.11 |

**Cluster 33:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Asthma ascertainment and characterization through electronic health records | MAYO CLINIC ROCHESTER | R01 | 2017 | 0.13 |
| Identification and characterization of children with asthma-associated comorbidities through computational and immune phenotyping | MAYO CLINIC ROCHESTER | R01 | 2020 | 0.13 |
| OBJECTIVE HOME MANAGEMENT OF PEDIATRIC ASTHMA EXACERBATION USING MOBILE TECHNOLOGY AND MACHINE LEARNING | AUSCULTECH DX, LLC | R41 | 2020 | 0.12 |
| SCH: kHealth: Semantic Multisensory Mobile Approach to Personalized Asthma Care | WRIGHT STATE UNIVERSITY | R01 | 2018 | 0.12 |
| Nasal biomarkers of asthma | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | R01 | 2019 | 0.11 |

**Cluster 34:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Collaborative Research: Statistical algorithms for anomaly detection and patterns recognition in patient care and safety event reports | VIRGINIA POLYTECHNIC INST AND ST UNIV | R01 | 2019 | 0.078 |
| Collaborative Research: Statistical algorithms for anomaly detection and patterns recognition in patient care and safety event reports | NORTH CAROLINA STATE UNIVERSITY RALEIGH | R01 | 2020 | 0.078 |
| Pharmacovigilence using Natural Language Processing, Statistics, and the EHR | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2012 | 0.077 |
| EHR-based patient safety: Automated error detection in neonatal intensive care | CINCINNATI CHILDRENS HOSP MED CTR | R21 | 2013 | 0.077 |
| Transforming Patient Safety Event Data into Actionable Insights through Advanced Analytics | MEDSTAR HEALTH RESEARCH INSTITUTE | R01 | 2020 | 0.075 |

**Cluster 35:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Bringing Modern Data Science Tools to Bear on Environmental Mixtures: Administrative Supplement for U3 Populations | RICE UNIVERSITY | R01 | 2019 | 0.094 |
| Spatiotemporal Risk Assessment Modeling of Chemical Mixtures | OREGON STATE UNIVERSITY | K99 | 2019 | 0.092 |
| Administrative Supplement for Sleep and Cardiometabolic Health Disparities at the US/Mexico Border: The Nogales Cardiometabolic Health and Sleep (NoCHeS) Study | UNIVERSITY OF ARIZONA | R01 | 2019 | 0.089 |
| Determinants of insufficient sleep among blacks and effects on disparities in health outcomes | NEW YORK UNIVERSITY SCHOOL OF MEDICINE | R01 | 2020 | 0.089 |
| Principal Component Pursuit to Assess Exposure to Environmental Mixtures in Epidemiologic Studies | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2020 | 0.089 |

**Cluster 36:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Transcriptomics of Tuberculosis Latency and Reactivation in Primates | TULANE UNIVERSITY OF LOUISIANA | R01 | 2013 | 0.47 |
| Mentoring in Immunometabolic Dysregulation in TB and TB/HIV | JOHNS HOPKINS UNIVERSITY | K24 | 2020 | 0.45 |
| Identifying individuals at risk of progression to active tuberculosis | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2020 | 0.44 |
| Signature of profiling and staging the progression of TB from infection to disease. | BOSTON UNIVERSITY MEDICAL CAMPUS | R21 | 2020 | 0.42 |
| Discovering hidden groups across tuberculosis patient and pathogen genotype data | RENSSELAER POLYTECHNIC INSTITUTE | R01 | 2011 | 0.41 |

**Cluster 37:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Predicting Self-Harm, Suicide Attempt, and Suicidal Death using Longitudinal EHR, Claims and Mortality Data | WEILL MEDICAL COLL OF CORNELL UNIV | R01 | 2020 | 0.3 |
| Digital Monitoring of Agitation for Short-Term Suicide Risk Prediction | MASSACHUSETTS GENERAL HOSPITAL | K23 | 2020 | 0.29 |
| Prediction of suicide death using EHR and polygenic risk scores | UNIVERSITY OF UTAH | R01 | 2020 | 0.28 |
| Decision Processes of Late-Life Suicide | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2018 | 0.27 |
| Innovations in Suicide Prevention Research (INSPIRE) | UNIV OF NORTH CAROLINA CHAPEL HILL | R01 | 2020 | 0.27 |

**Cluster 38:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Macro-vasculature: A Novel Image Biomarker of Lung Cance | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2020 | 0.097 |
| Histopathology correlated quantitative analysis of lung nodules with LDCT for early detection of lung cancer | UNIVERSITY OF MICHIGAN AT ANN ARBOR | U01 | 2020 | 0.093 |
| STAN-CT: Standardization and Normalization of CT images for Lung Cancer Patients | UNIVERSITY OF KENTUCKY | R21 | 2020 | 0.093 |
| A Computer Tool for Aiding in Accurate Assessment of Indeterminate Lung Nodules | INTERNATIONAL INTELLIGENT INFOR/SOLU/LAB | R44 | 2019 | 0.09 |
| A diagnostic model for malignant pulmonary nodules | UNIVERSITY OF MARYLAND BALTIMORE | R21 | 2020 | 0.087 |

**Cluster 39:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Digital Mammography: Advanced Computer-Aided Breast Can\* | UNIVERSITY OF MICHIGAN | R01 | 2007 | 0.26 |
| Computer-Aided Detection of Urinary Tract Cancer on MDCT Urography | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2014 | 0.22 |
| Digital Tomosynthesis Mammography: Computer-Aided Analysis of Masses | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R33 | 2009 | 0.22 |
| Toward Diagnostics and Therapies of Molecular Subcategories of CAD | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | R01 | 2018 | 0.2 |
| Improving Breast Cancer Detection and Diagnosis with CAD | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2011 | 0.2 |

**Cluster 40:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Multi-omic Subtyping of Chronic Obstructive Pulmonary Disease | BRIGHAM AND WOMEN'S HOSPITAL | K08 | 2020 | 0.4 |
| Combined Cardiopulmonary Failure in COPD: SPIROMICS HF | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2020 | 0.38 |
| Autoimmunity as a Mechanism for Atherosclerosis in COPD | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | K23 | 2019 | 0.38 |
| Machine Learning Development for Subtyping COPD | BRIGHAM AND WOMEN'S HOSPITAL | K25 | 2020 | 0.36 |
| Omics Data Integration to Identify Disease Pathways in COPD | UNIVERSITY OF COLORADO DENVER | R21 | 2018 | 0.35 |

**Cluster 41:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Predicting brain tumor progression via multiparametric image analysis and modelin | UNIVERSITY OF PENNSYLVANIA | R01 | 2018 | 0.19 |
| MDCT Quantification of hepatic tumor viability for assessment of cancer therapy | IQ MEDICAL IMAGING, LLC | R42 | 2019 | 0.14 |
| Quantitative Multimodal Image Guidance for Improved Liver Cancer Treatment | YALE UNIVERSITY | R01 | 2020 | 0.14 |
| Automatic Volumetric Treatment Response Assessment and Determination of Regional Genetic Characteristics in Glioblastoma | HARVARD MEDICAL SCHOOL | F30 | 2020 | 0.14 |
| SBIR Phase I Topic 402 - Artificial Intelligence-Aided Imaging for Cancer Prevention, Diagnosis, and Monitoring | PHENOMAPPER, LLC | N43 | 2020 | 0.13 |

**Cluster 42:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Computational genome-wide RNA profiling using next-generation sequencing | UNIVERSITY OF PENNSYLVANIA | R01 | 2016 | 0.34 |
| Discovery of Novel RNA Genes in Genomic DNA Sequences | UNIVERSITY OF CALIF-LAWRENC BERKELEY LAB | R01 | 2005 | 0.3 |
| Programmable RNA-targeting CRISPR-Cas tools to study RNA biology | UNIVERSITY OF ROCHESTER | R35 | 2020 | 0.3 |
| An Automated RNA 3D Structure Determination System | NYMIRUM, INC. | R44 | 2016 | 0.3 |
| Structure, function, and dynamics of viral RNAs and RNA-containing complexes | UNIVERSITY OF COLORADO DENVER | R35 | 2020 | 0.28 |

**Cluster 43:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Reliable Seizure Prediction Using Physiological Signals and Machine Learning | MAYO CLINIC ROCHESTER | R01 | 2019 | 0.41 |
| Dynamics of long range network interactions in focal epilepsy | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2020 | 0.35 |
| Trainable Early Warning System for Epileptic Seizures | CHATTEN ASSOCIATES, INC. | R44 | 2006 | 0.34 |
| Tracking pre-seizure dynamics to predict and control seizures | STANFORD UNIVERSITY | R01 | 2020 | 0.34 |
| Seizure Prediction in a Rodent Model of Focal Epilepsy | HARVARD MEDICAL SCHOOL | F31 | 2018 | 0.34 |

**Cluster 44:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Improved Glaucoma Monitoring Using Artificial-Intelligence Enabled Dashboard | UNIVERSITY OF TENNESSEE HEALTH SCI CTR | R21 | 2020 | 0.015 |
| Relationship between Glaucoma and the Three-Dimensional Optic Nerve Head Related Structure | SCHEPENS EYE RESEARCH INSTITUTE | K99 | 2020 | 0.013 |
| Functional and Structural Optical Coherence Tomography for Glaucoma | OREGON HEALTH & SCIENCE UNIVERSITY | R01 | 2020 | 0.012 |
| Visible-light OCT angiography, velocimetry, and oximetry for characterizing retinal vascular alterations in glaucoma | OREGON HEALTH & SCIENCE UNIVERSITY | R01 | 2020 | 0.0091 |
| Diagnostic Innovations in Glaucoma: Clinical Electrophysiology | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R21 | 2008 | 0.0083 |

**Cluster 45:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Statistical Learning in Language Acquisition | UNIVERSITY OF WISCONSIN-MADISON | R37 | 2019 | 0.2 |
| Statistical approaches to linguistic pattern learning | GEORGETOWN UNIVERSITY | R01 | 2019 | 0.18 |
| "Mechanisms of Early Bilingual Language Acquisition" | UNIVERSITY OF CALIFORNIA AT DAVIS | R03 | 2017 | 0.17 |
| Infant statistical learning: Resilience, longevity, and specificity | UNIVERSITY OF TENNESSEE KNOXVILLE | R01 | 2019 | 0.16 |
| Distributional Learning in Children with Language Impairment | UNIVERSITY OF IOWA | F31 | 2017 | 0.16 |

**Cluster 46:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| EMR-Linked Biobank for Translational Genomics | GEISINGER CLINIC | U01 | 2019 | 0.26 |
| OMOP information model for eMERGE phenotyping | GEISINGER CLINIC | U01 | 2017 | 0.25 |
| The Electronic Medical Records and Genomics (eMERGE) Network, Phase III | KAISER FOUNDATION RESEARCH INSTITUTE | U01 | 2019 | 0.25 |
| Better Outcomes for Children: Promoting Excellence in Healthcare Genomics to Inform Policy | CINCINNATI CHILDRENS HOSP MED CTR | U01 | 2019 | 0.21 |
| EHR-based Genomic Discovery and Implementation | MAYO CLINIC ROCHESTER | U01 | 2019 | 0.21 |

**Cluster 47:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Integrated Prediction of Protein Struture at 1D, 2D and 3D Levels | UNIVERSITY OF MISSOURI-COLUMBIA | R01 | 2013 | 0.2 |
| Distance-based ab initio protein structure prediction | UNIVERSITY OF MISSOURI-COLUMBIA | R01 | 2020 | 0.18 |
| Advanced approaches to protein structure prediction | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R35 | 2020 | 0.18 |
| New Computational Methods for Data-driven Protein Structure Prediction | TOYOTA TECHNOLOGICAL INSTITUTE / CHICAGO | R01 | 2020 | 0.18 |
| Mining the Structural Genomics Pipeline | YALE UNIVERSITY | F32 | 2006 | 0.17 |

**Cluster 48:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Optimization and joint modeling for peptide detection by tandem mass spectrometry | UNIVERSITY OF WASHINGTON | R01 | 2020 | 0.15 |
| Self Correcting Nanoflow LC-MS for Clinical Proteomics | UNIVERSITY OF WASHINGTON | R01 | 2016 | 0.14 |
| Skyline Targeted Proteomics Environment | UNIVERSITY OF WASHINGTON | R01 | 2020 | 0.11 |
| Advanced Computational Approaches for NMR Data-mining | BAYLOR COLLEGE OF MEDICINE | R01 | 2020 | 0.1 |
| High-throughput annotation of glycan mass spectra | PALO ALTO RESEARCH CENTER | R01 | 2009 | 0.1 |

**Cluster 49:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Mediators and Moderators of a Neighborhood Experiment on Alcohol Use | UNIVERSITY OF MINNESOTA | R21 | 2017 | 0.2 |
| Alcohol Use: Nonlinearities in Intraindividual Variables | UNIVERSITY OF SOUTHERN CALIFORNIA | F31 | 2005 | 0.2 |
| Ambulatory assessment of alcohol use, mood dysregulation, and alcohol craving | UNIVERSITY OF MISSOURI-COLUMBIA | R21 | 2014 | 0.18 |
| Alcohol Misuse: An Independent Risk Factor that Increases the Incidence and Severity of COVID-19 | RUSH UNIVERSITY MEDICAL CENTER | R24 | 2020 | 0.18 |
| How Cannabis Use Affects Alcohol Treatment Outcomes | PUBLIC HEALTH INSTITUTE | R21 | 2016 | 0.18 |

**Cluster 50:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| The role of area V4 in the perception and recognition of visual objects | UNIVERSITY OF WASHINGTON | R01 | 2018 | 0.12 |
| Perceptual Organization and Attention: Behavior & fMRI | JOHNS HOPKINS UNIVERSITY | F31 | 2006 | 0.11 |
| Perceptual bases of visual concepts | UNIVERSITY OF IOWA | R01 | 2010 | 0.11 |
| Post-natal development of high-level visual representation in primates | MASSACHUSETTS INSTITUTE OF TECHNOLOGY | R21 | 2018 | 0.11 |
| Neurocognitive basis of attention and eye movement guidance in the real world scenes | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R21 | 2020 | 0.1 |

**Cluster 51:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Shape up! Kids | UNIVERSITY OF HAWAII AT MANOA | R01 | 2020 | 0.13 |
| Optical Body Composition and Health Assessment | UNIVERSITY OF HAWAII AT MANOA | R01 | 2020 | 0.13 |
| Mobile Food Intake Visualization and Voice Recognize (FIVR) | VIOCARE, INC. | U01 | 2010 | 0.11 |
| Calculation of Percent Body Fat by Analyzing Virtual Body Models | GEORGE WASHINGTON UNIVERSITY | R21 | 2016 | 0.1 |
| Computerized Radiographic Analysis of Bone Structure | UNIVERSITY OF CHICAGO | R01 | 2005 | 0.086 |

**Cluster 52:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Novel Computational Analysis of Prosody in ASD and the Broad Autism Phenotype | NORTHWESTERN UNIVERSITY | R03 | 2020 | 0.21 |
| Novel computer vision-based assessment of infant-caregiver synchrony as an early level II screening tool for autism | CHILDREN'S HOSP OF PHILADELPHIA | R21 | 2020 | 0.2 |
| Novel video-based approaches for detection of autism risk in the first year of life | UNIVERSITY OF CALIFORNIA AT DAVIS | R01 | 2020 | 0.2 |
| Clinical algorithm for identifying adult autism | UNIVERSITY OF PENNSYLVANIA | R34 | 2015 | 0.2 |
| Investigating quantitative signatures of autism in toddlers | COLUMBIA UNIVERSITY TEACHERS COLLEGE | R01 | 2020 | 0.19 |

**Cluster 53:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Analytic Methods for Determining Multimodal Biomarkers for Parkinson's Disease | COLUMBIA UNIVERSITY HEALTH SCIENCES | U18 | 2014 | 0.035 |
| Analysis of Multi-Voxel Patterns of Activity in fMRI data | DARTMOUTH COLLEGE | R01 | 2010 | 0.032 |
| Pattern analysis of large-scale functional connectivity to predict implicit emoti | COLUMBIA UNIVERSITY HEALTH SCIENCES | F31 | 2011 | 0.031 |
| Pattern Analysis of Large-Scale Functional Connectivity in SAD | COLUMBIA UNIVERSITY HEALTH SCIENCES | F31 | 2012 | 0.031 |
| Intrinsic Cortical Networks and Cognitive Dysfunction in Parkinson's Disease | UNIVERSITY OF COLORADO DENVER | K02 | 2017 | 0.029 |

**Cluster 54:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Leveraging interactive SMS messaging to monitor and support maternal mental health in Kenya | UNIVERSITY OF WASHINGTON | K18 | 2020 | 0.013 |
| Transition from Risk Factors to Early HF: Prevalence, Pathogenesis, and Phenomics | WAKE FOREST UNIVERSITY HEALTH SCIENCES | R01 | 2018 | 0.011 |
| Individualized Expert Systems for Weight Management | PRO-CHANGE BEHAVIOR SYSTEMS, INC. | R44 | 2005 | 0.011 |
| Obesity Prevention in Postpartum Women at High-Risk of Cardiovascular Disease | UNIVERSITY OF PENNSYLVANIA | K23 | 2020 | 0.0075 |
| Artificial Intelligence in a Mobile Intervention for Depression (AIM) | NORTHWESTERN UNIVERSITY AT CHICAGO | R01 | 2017 | 0.0071 |

**Cluster 55:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Institutional Collaboration between LSTM and CDC and Prevention on Malaria(U01) | TMLIVERPOOL SCHOOL OF TROPICAL MEDICINE | U01 | 2015 | 0.47 |
| Institutional Research Collaboration between the Liverpool School of Tropical Medicine and the Centers for Department of Health and Human Services Centers for Disease Control and Prevention | TMLIVERPOOL SCHOOL OF TROPICAL MEDICINE | U01 | 2019 | 0.45 |
| Institutional Collaboration Between Liverpool STM & CDC on Malaria | TMLIVERPOOL SCHOOL OF TROPICAL MEDICINE | U01 | 2009 | 0.43 |
| Towards noninvasive diagnosis of malaria | CHILDREN'S HOSP OF PHILADELPHIA | R21 | 2020 | 0.4 |
| Malaria Operations Research to Improve Malaria Control and Reduce Morbidity and Mortality in Western Kenya | TMLIVERPOOL SCHOOL OF TROPICAL MEDICINE | U01 | 2020 | 0.38 |

**Cluster 56:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Air Particulate, Metals, and Cognitive Performance in an Aging Cohort- Roles of Circulating Extracellular Vesicles and Non-coding RNAs | HARVARD SCHOOL OF PUBLIC HEALTH | R01 | 2020 | 0.08 |
| A Novel Mechanism for Helping Older Adults Discontinue Use of Sleeping Pills | UNIVERSITY OF CALIFORNIA LOS ANGELES | R01 | 2020 | 0.072 |
| Evaluating Longitudinal Changes in the Human Structural Connectome in Relation to Cognitive Aging | UNIVERSITY OF TEXAS, AUSTIN | R01 | 2020 | 0.071 |
| The Adherence Promotion with Person-centered Technology (APPT) Project: Promoting Adherence to Enhance the Early Detection and Treatment of Cognitive Decline | FLORIDA STATE UNIVERSITY | R01 | 2020 | 0.067 |
| Planning for a Cohort Study on Neurocognitive Complication of Type 1 Diabetes in Children | UNIVERSITY OF CALIFORNIA AT DAVIS | U34 | 2020 | 0.061 |

**Cluster 57:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Statistical methods for real-time forecasts of infectious disease: dynamic time-series and machine learning approaches | UNIVERSITY OF MASSACHUSETTS AMHERST | R35 | 2020 | 0.18 |
| A Framework for Integrating Multiple Data Sources for Modeling and Forecasting of Infectious Diseases | UNIVERSITY OF WASHINGTON | K01 | 2016 | 0.18 |
| Models for synthesising molecular, clinical and epidemiological data, and transla | U OF L IMPERIAL COL OF SCI/TECHNLGY/MED | U01 | 2018 | 0.17 |
| Computational Models of Infectious Disease Threats | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | U01 | 2008 | 0.15 |
| Predictive Personalized Public Health (P3H): A Novel Paradigm to Treat Infectious Disease | PENNSYLVANIA STATE UNIV HERSHEY MED CTR | R01 | 2020 | 0.13 |

**Cluster 58:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Using Computational Approaches to Optimize Asthma Care Management | UNIVERSITY OF WASHINGTON | R01 | 2020 | 0.059 |
| Improving Ethical Care for Patients who are Incapacitated with No Evident Advance Directives or Surrogates (INEADS) | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | R21 | 2020 | 0.056 |
| Avoidable Acute Care Use among Patients with Lupus | BRIGHAM AND WOMEN'S HOSPITAL | K23 | 2020 | 0.048 |
| Analytics-Based Platform for Diabetic Retinopathy Care Management | RETINAL CARE, INC. | R41 | 2019 | 0.047 |
| A Technology-Driven Intervention to Improve Early Detection and Management of Cognitive Impairment | HEALTHPARTNERS INSTITUTE | R61 | 2020 | 0.045 |

**Cluster 59:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Molecular and Genetic Predictors of Disability Progression in MS | YALE UNIVERSITY | R01 | 2013 | 0.33 |
| Novel Strategies to Identify GxE Contributions to MS Pathogenesis | UNIVERSITY OF CALIFORNIA BERKELEY | R01 | 2015 | 0.32 |
| Improving Diagnosis of Multiple Sclerosis Through the Integration of Novel Imaging and Laboratory Biomarkers | UNIVERSITY OF VERMONT & ST AGRIC COLLEGE | K02 | 2020 | 0.29 |
| Integrating EHR and Genomics to Predict Multiple Sclerosis Drug Response | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2020 | 0.29 |
| Predicting Patient Outcome in Multiple Sclerosis using a Quantitative Radiomic Approach | UNIVERSITY OF TEXAS, AUSTIN | R03 | 2020 | 0.25 |