**Cluster 0:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Development and Evaluation of a Learning Electronic Medical Record System | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2018 | 0.082 |
| Vanderbilt Genome-Electronic Records Project | VANDERBILT UNIVERSITY | U01 | 2011 | 0.075 |
| Real-time detection of deviations in clinical care in ICU data streams | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2017 | 0.057 |
| Semi-supervised learning with electronic medical records | HARVARD SCHOOL OF PUBLIC HEALTH | F31 | 2016 | 0.054 |
| Optimizing the Utility of Large Electronic Health Records Data in Data-Driven Health Research | TENNESSEE STATE UNIVERSITY | R15 | 2020 | 0.054 |

**Cluster 1:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Functional Cardiovascular 4D MRI in Congenital Heart Disease | NORTHWESTERN UNIVERSITY AT CHICAGO | R01 | 2020 | 0.11 |
| Machine learning for fast motion compensated quantitative abdominal DCE-MRI | BOSTON CHILDREN'S HOSPITAL | R21 | 2020 | 0.11 |
| Noninvasive imaging-based electrophysiology using microelectronic devices | MASSACHUSETTS INSTITUTE OF TECHNOLOGY | R01 | 2015 | 0.1 |
| Osteoarthritis: Quantitative Evaluation of Whole Joint Disease with MRI | STANFORD UNIVERSITY | R01 | 2020 | 0.096 |
| Rapid motion-robust quantitative DCE-MRI for the assessment of gynecologic cancers | SLOAN-KETTERING INST CAN RESEARCH | R01 | 2020 | 0.091 |

**Cluster 2:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Intrinsic Cortical Networks and Cognitive Dysfunction in Parkinson's Disease | UNIVERSITY OF COLORADO DENVER | K02 | 2017 | 0.11 |
| Intrinsic Cortical Networks and Cognitive Dysfunction in Parkinson???s Disease | UNIVERSITY OF COLORADO DENVER | K02 | 2014 | 0.11 |
| Characterizing Intrinsic Functional Cortical Networks in Parkinson Disease Dementia | UNIVERSITY OF COLORADO DENVER | R21 | 2017 | 0.1 |
| Mid-frontal delta/theta rhythms and cognitive control in PD | UNIVERSITY OF IOWA | R01 | 2020 | 0.099 |
| Comprehensive Multivariable Deep Learning Models to Identify Predictors of Cognitive Change in PD | UNIVERSITY OF ROCHESTER | RF1 | 2020 | 0.085 |

**Cluster 3:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Predicting brain tumor progression via multiparametric image analysis and modelin | UNIVERSITY OF PENNSYLVANIA | R01 | 2018 | 0.15 |
| Statistical atlases of brain tumor MRI:do imaging phenotypes predict progression? | UNIVERSITY OF PENNSYLVANIA | R01 | 2012 | 0.11 |
| Quantitative Multimodal Image Guidance for Improved Liver Cancer Treatment | YALE UNIVERSITY | R01 | 2020 | 0.11 |
| MDCT Quantification of hepatic tumor viability for assessment of cancer therapy | IQ MEDICAL IMAGING, LLC | R42 | 2019 | 0.099 |
| Exploring the Role of Mitochondrial Fission in Pancreatic Tumorigenesis | UNIVERSITY OF VIRGINIA | R01 | 2017 | 0.091 |

**Cluster 4:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A Real-Time Computational System for Detecting ARDS Using Ventilator Waveform Data | UNIVERSITY OF CALIFORNIA AT DAVIS | F31 | 2020 | 0.0056 |
| An unobtrusive monitoring device used for tracking asthma symptoms and lungfunction variability | CLAIRWAYS, LLC | R41 | 2020 | 0.0042 |
| SCH: kHealth: Semantic Multisensory Mobile Approach to Personalized Asthma Care | WRIGHT STATE UNIVERSITY | R01 | 2018 | 0.0028 |
| Data, Modeling,and Coordination Center for PrecISE Network | UNIV OF NORTH CAROLINA CHAPEL HILL | U24 | 2020 | 0.0027 |
| SBIR Topic 379: DigiBioMarC: Digital BioMarkers for Clinical Impact- Moonshot Project(Fast Track) | MEDABLE, INC. | N43 | 2019 | 0.0024 |

**Cluster 5:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A Machine Learning Platform for Adaptive Chemical Screening | MORGRIDGE INSTITUTE FOR RESEARCH, INC. | R01 | 2020 | 0.08 |
| Development of a Biocatalytic Platform for Convergent Synthesis of Chiral Amines | CALIFORNIA INSTITUTE OF TECHNOLOGY | R01 | 2020 | 0.076 |
| High Throughput Screen for Myotonic Dystrophy Type 1 | UNIVERSITY OF SOUTHERN CALIFORNIA | R03 | 2011 | 0.069 |
| Classification Algorithms for Chemical Compounds | UNIVERSITY OF MINNESOTA | R01 | 2008 | 0.067 |
| Identification of Therapeutic Small Molecules for Myotonic Dystrophy Type 1 | UNIVERSITY OF SOUTHERN CALIFORNIA | R21 | 2013 | 0.066 |

**Cluster 6:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Predictive modeling: the role of opioid use in suicide risk | KAISER FOUNDATION RESEARCH INSTITUTE | R01 | 2020 | 0.24 |
| Evaluating opioids and suicide prevention in health care settings through the System of Safety | UNIV OF MASSACHUSETTS MED SCH WORCESTER | R01 | 2020 | 0.23 |
| Predicting Self-Harm, Suicide Attempt, and Suicidal Death using Longitudinal EHR, Claims and Mortality Data | WEILL MEDICAL COLL OF CORNELL UNIV | R01 | 2020 | 0.22 |
| Innovations in Suicide Prevention Research (INSPIRE) | UNIV OF NORTH CAROLINA CHAPEL HILL | R01 | 2020 | 0.21 |
| Treatment Utilization Before Suicide (TUBS) | HENRY FORD HEALTH SYSTEM | R01 | 2018 | 0.21 |

**Cluster 7:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| FACIAL EXPRESSION ANALYSIS BY IMAGE PROCESSING | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2005 | 0.073 |
| Automated Facial Expression Analysis for Research and Clinical Use | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2016 | 0.067 |
| 4/5 HEAL Consortium: Establishing Innovative Approaches for the HEALthy Brain and Child Development Study | CINCINNATI CHILDRENS HOSP MED CTR | R34 | 2019 | 0.059 |
| 1/5, HEAL Consortium: Establishing Innovative Approaches for the HEALthy Brain and Child Development Study | UNIV OF NORTH CAROLINA CHAPEL HILL | R34 | 2019 | 0.059 |
| 2/5 HEAL Consortium: Establishing Innovative Approaches for the HEALthy Brain and Child Development Study | DUKE UNIVERSITY | R34 | 2019 | 0.059 |

**Cluster 8:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 | 0.19 |
| Advanced approaches to protein structure prediction | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R35 | 2020 | 0.18 |
| PREDOCTORAL FELLOWSHIPS FOR STUDENTS WITH DISABILITIES | PRINCETON UNIVERSITY | F31 | 2004 | 0.17 |
| Distance-based ab initio protein structure prediction | UNIVERSITY OF MISSOURI-COLUMBIA | R01 | 2020 | 0.16 |
| Mining the Structural Genomics Pipeline | YALE UNIVERSITY | F32 | 2006 | 0.16 |

**Cluster 9:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Computational Models of Infectious Disease Threats | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | U01 | 2008 | 0.017 |
| Computational Studies of Virus-host Interactions Using Metagenomics Data and Applications | UNIVERSITY OF SOUTHERN CALIFORNIA | R01 | 2020 | 0.014 |
| Combining chemical and computational tools for predictive models of microbiome communities | UNIVERSITY OF PENNSYLVANIA | R35 | 2020 | 0.012 |
| Improving predictive capacity of models for universal influenza vaccine development | ST. JUDE CHILDREN'S RESEARCH HOSPITAL | R01 | 2020 | 0.0096 |
| FluMod - Center for the Multiscale Modeling of Pandemic and seasonal Flu Prevention and Control | NORTHEASTERN UNIVERSITY | U01 | 2020 | 0.0091 |

**Cluster 10:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| The development of fluent and automatic reading | UNIVERSITY OF GEORGIA (UGA) | R01 | 2005 | 0.077 |
| THE DEVELOPMENT OF FLUENT AND AUTOMATIC READING | UNIVERSITY OF GEORGIA (UGA) | R01 | 2000 | 0.077 |
| Effectiveness and predictors of response for a technology-based reading intervention in the home | UNIVERSITY OF CONNECTICUT STORRS | R01 | 2020 | 0.058 |
| NIDA STRENGTHENING WASHINGTON, DC FAMILIES GRANT | UNIVERSITY OF UTAH | R01 | 2004 | 0.056 |
| A preschool biomarker for literacy | NORTHWESTERN UNIVERSITY | R01 | 2016 | 0.054 |

**Cluster 11:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Bringing Modern Data Science Tools to Bear on Environmental Mixtures | RICE UNIVERSITY | R01 | 2020 | 0.08 |
| BRINGING MODERN DATA SCIENCE TOOLS TO BEAR ON ENVIRONMENTAL MIXTURES | UNIVERSITY OF NOTRE DAME | R01 | 2020 | 0.08 |
| HERCULES: Exposome Research Center | EMORY UNIVERSITY | P30 | 2020 | 0.069 |
| Bringing Modern Data Science Tools to Bear on Environmental Mixtures: Administrative Supplement for U3 Populations | RICE UNIVERSITY | R01 | 2019 | 0.068 |
| Supplementing Survey-Based Analyses of Group Vaccination Narratives and Behaviors Using Social Media | GEORGE WASHINGTON UNIVERSITY | R01 | 2019 | 0.067 |

**Cluster 12:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Designing Visually Accessible Spaces | UNIVERSITY OF MINNESOTA | R01 | 2018 | 0.11 |
| Locating and Reading Informational Signs | UNIVERSITY OF CALIFORNIA LOS ANGELES | R01 | 2004 | 0.1 |
| Providing Access to Appliance Displays for Visually Impaired Users | SMITH-KETTLEWELL EYE RESEARCH INSTITUTE | R01 | 2015 | 0.1 |
| Leveraging Maps and Computer Vision to Support Indoor Navigation for Blind Travelers | SMITH-KETTLEWELL EYE RESEARCH INSTITUTE | R01 | 2020 | 0.098 |
| SIGN FINDER: COMPUTER VISION TO FIND AND READ SIGNS | BLINDSIGHT CORPORATION | R43 | 2000 | 0.097 |

**Cluster 13:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| National Center for Biomedical Ontology | STANFORD UNIVERSITY | U54 | 2014 | 0.085 |
| Protege: A Knowledge-Engineering Environment for Advancing Biomedical Sciences | STANFORD UNIVERSITY | R01 | 2020 | 0.076 |
| Automated Integration of Biomedical Knowledge | BRIGHAM AND WOMEN'S HOSPITAL | R01 | 2010 | 0.074 |
| A Resource for Biomedical Ontologies and Knowledge Bases | STANFORD UNIVERSITY | P41 | 2010 | 0.068 |
| Big Data Coursework for Computational Medicine | WEILL MEDICAL COLL OF CORNELL UNIV | R25 | 2016 | 0.066 |

**Cluster 14:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Large-Scale Semiparametric Graphical Models with Applications to Neuroscience | PRINCETON UNIVERSITY | R01 | 2017 | 0.064 |
| BRAIN INITIATIVE RESOURCE: DEVELOPMENT OF A HUMAN NEUROELECTROMAGNETIC DATA ARCHIVE AND TOOLS RESOURCE (NEMAR) | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R24 | 2020 | 0.062 |
| Methods for Dynamic Causal Interactions in Human Brain Function and Dysfunction | STANFORD UNIVERSITY | R01 | 2018 | 0.059 |
| A BRAIN Initiative Resource: The Neuroscience Multi-omic Data Archive | UNIVERSITY OF MARYLAND BALTIMORE | R24 | 2020 | 0.059 |
| C-PAC: A configurable, compute-optimized, cloud-enabled neuroimaging analysis software for reproducible translational and comparative | CHILD MIND INSTITUTE, INC. | R24 | 2020 | 0.056 |

**Cluster 15:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Speech Prosody and Articulatory Dynamics in Spoken Language | UNIVERSITY OF SOUTHERN CALIFORNIA | R01 | 2016 | 0.32 |
| Wearable silent speech technology to enhance impaired oral communication | UNIVERSITY OF TEXAS, AUSTIN | R01 | 2020 | 0.28 |
| Dynamics of Vocal Tract Shaping | UNIVERSITY OF SOUTHERN CALIFORNIA | R01 | 2020 | 0.27 |
| Objectively Quantifying Speech Outcomes of Children with Cleft Palate | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | R21 | 2019 | 0.27 |
| Functional Architecture of Speech Motor Cortex | UNIVERSITY OF CALIFORNIA, SAN FRANCISCO | U01 | 2018 | 0.27 |

**Cluster 16:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| CorBand: A novel wearable wrist sensor for heart failure remote monitoring | RETHINK MEDICAL, INC. | R44 | 2017 | 0.14 |
| Transition from Risk Factors to Early HF: Prevalence, Pathogenesis, and Phenomics | WAKE FOREST UNIVERSITY HEALTH SCIENCES | R01 | 2018 | 0.13 |
| Charting a New Course for Heart Failure: From Discovery to Data | KEYSTONE SYMPOSIA | R13 | 2020 | 0.12 |
| Advanced Heart Failure: Epidemiology and Outcomes | MAYO CLINIC ROCHESTER | R01 | 2020 | 0.12 |
| Air Pollution, Heart Failure and Atrial Fibrillation in MESA | UNIVERSITY OF WASHINGTON | R56 | 2017 | 0.12 |

**Cluster 17:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Computational Prediction and Functional Validation of Novel Risk Loci of Alzheimer's Disease | EMORY UNIVERSITY | R56 | 2018 | 0.28 |
| Assessing ASL CBF as a biomarker for early Alzheimer's disease detection and disease progression | UNIVERSITY OF MARYLAND BALTIMORE | R01 | 2020 | 0.27 |
| Computational Prediction and Functional Validation of Novel Epigenetic Risk Loci in Alzheimer's Disease | EMORY UNIVERSITY | R56 | 2018 | 0.27 |
| Disparities in the Diagnosis of Alzheimer's Disease Among African American and European American Veterans | SEATTLE INST FOR BIOMEDICAL/CLINICAL RES | R56 | 2018 | 0.27 |
| Circadian Organization and Disorder in Alzheimer's Disease | UNIVERSITY OF PENNSYLVANIA | R01 | 2020 | 0.25 |

**Cluster 18:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| CRCNS: Learning the Neural Code for Prosthetic Control | BROWN UNIVERSITY | R01 | 2006 | 0.055 |
| Neural dynamics and adaption for brain machine interface control | STANFORD UNIVERSITY | F31 | 2019 | 0.054 |
| A novel geometric paradigm for nonlinear modeling and control of neural dynamics | UNIVERSITY OF SOUTHERN CALIFORNIA | DP2 | 2020 | 0.053 |
| An Intracortical Brain-Computer Interface Model for High Efficiency Development of Closed-Loop Neural Decoding Algorithms | FLORIDA INTERNATIONAL UNIVERSITY | R01 | 2020 | 0.053 |
| Spinal Epidural Electrode Array To Facilitate Standing and Stepping After SCI | UNIVERSITY OF CALIFORNIA LOS ANGELES | U01 | 2018 | 0.053 |

**Cluster 19:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Leveraging Tissue-Specific Regulatory Grammar to Interpret Human Evolution and Non-coding Variation | HARVARD UNIVERSITY | F32 | 2019 | 0.11 |
| Comprehensive functional characterization and dissection of noncoding regulatory elements and human genetic variation | BROAD INSTITUTE, INC. | UM1 | 2020 | 0.1 |
| Interrogating regulatory variants by multiplexed genome editing | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R21 | 2019 | 0.1 |
| High-resolution map of human germline mutation patterns and inference of mutagenic mechanisms | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2019 | 0.081 |
| Predicting causal non-coding variants in a founder population | STANFORD UNIVERSITY | R01 | 2017 | 0.075 |

**Cluster 20:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| From enrichment to insights | STANFORD UNIVERSITY | R01 | 2020 | 0.083 |
| EHR-Based Strategies to Improve Outcomes in Familial Hypercholesterolemia | MAYO CLINIC ROCHESTER | R01 | 2020 | 0.079 |
| SCH: Enhancing Nurse Decision-Making via Augmented Communication Tools (ACTs) | UNIVERSITY OF ARIZONA | R01 | 2016 | 0.073 |
| Biases introduced by filtering electronic health records for patients with "complete data" | HARVARD MEDICAL SCHOOL | R01 | 2020 | 0.071 |
| Semi-supervised Algorithms for Risk Assessment with Noisy EHR Data | HARVARD SCHOOL OF PUBLIC HEALTH | R21 | 2020 | 0.069 |

**Cluster 21:**

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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 | 0.12 |
| Systems Analysis of cell type differentiation in Xenopus development | HARVARD MEDICAL SCHOOL | R01 | 2020 | 0.11 |
| Single Cell Transcriptomic and Genetic Diversity by Single Molecule Long Read Sequencing | UNIVERSITY OF PENNSYLVANIA | R01 | 2020 | 0.11 |
| Single-cell multi-protein device for informative cellular function evaluation | ISOPLEXIS, INC. | R43 | 2016 | 0.11 |
| Symmetry breaking and polarization of cell in 3D environments | UT SOUTHWESTERN MEDICAL CENTER | F32 | 2017 | 0.11 |

**Cluster 22:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Lung cancer in East Africa and the relationship to HIV-1 infection: epidemiology, molecular characterization and imaging | CASE WESTERN RESERVE UNIVERSITY | U54 | 2020 | 0.083 |
| Statistical Methods for Gene Environment Interactions In Lung Cancer | UNIVERSITY OF TX MD ANDERSON CAN CTR | R01 | 2009 | 0.082 |
| EARLY DETECTION OF LUNG CANCER USING METABOLOMIC LIPID PROFILING | RUSH UNIVERSITY MEDICAL CENTER | R21 | 2014 | 0.08 |
| UCSC-Buck Inst. Genome Data Analysis Center for TCGA Research Network (GDAC) | UNIVERSITY OF CALIFORNIA SANTA CRUZ | U24 | 2016 | 0.075 |
| Serum Proteomic Biomarker Discovery in Lung Cancer | DANA-FARBER CANCER INST | K08 | 2007 | 0.07 |

**Cluster 23:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Enhancing an EMR-Based Real-Time Sepsis Alert System Performance through Machine Learning | WAYNE STATE UNIVERSITY | R21 | 2017 | 0.35 |
| Using Big Data to Understand Sepsis in an Immunocompromised Population | UNIVERSITY OF WASHINGTON | F31 | 2020 | 0.35 |
| A New Tool to Rapidly Diagnose Sepsis using Flow Imaging Microscopy and Machine Learning | URSA ANALYTICS, INC. | R43 | 2020 | 0.32 |
| PED Screen: Pediatric Sepsis EHR Registry, Clinical Outcomes, and Predictive Model | NORTHWESTERN UNIVERSITY AT CHICAGO | R01 | 2020 | 0.31 |
| Automated detection and prediction of atrial fibrillation during sepsis | BOSTON UNIVERSITY MEDICAL CAMPUS | R01 | 2020 | 0.3 |

**Cluster 24:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 |
| Machine Learning Development for Subtyping COPD | BRIGHAM AND WOMEN'S HOSPITAL | K25 | 2020 | 0.38 |
| Autoimmunity as a Mechanism for Atherosclerosis in COPD | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | K23 | 2019 | 0.37 |
| Combined Cardiopulmonary Failure in COPD: SPIROMICS HF | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2020 | 0.36 |
| Predictive Modeling with Clinical and Genomic Data in COPD | BRIGHAM AND WOMEN'S HOSPITAL | K08 | 2014 | 0.35 |

**Cluster 25:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Digital Mammography: Advanced Computer-Aided Breast Can\* | UNIVERSITY OF MICHIGAN | R01 | 2007 | 0.21 |
| Computer-Aided Detection of Urinary Tract Cancer on MDCT Urography | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2014 | 0.21 |
| Improving Breast Cancer Detection and Diagnosis with CAD | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2011 | 0.19 |
| COMPUTER AIDED DIAGNOSIS IN CHEST RADIOGRAPHY | UNIVERSITY OF CHICAGO | R01 | 2004 | 0.18 |
| Toward Diagnostics and Therapies of Molecular Subcategories of CAD | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | R01 | 2018 | 0.17 |

**Cluster 26:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Transcriptomics of Tuberculosis Latency and Reactivation in Primates | TULANE UNIVERSITY OF LOUISIANA | R01 | 2013 | 0.5 |
| Mentoring in Immunometabolic Dysregulation in TB and TB/HIV | JOHNS HOPKINS UNIVERSITY | K24 | 2020 | 0.47 |
| Identifying individuals at risk of progression to active tuberculosis | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2020 | 0.45 |
| Discovering hidden groups across tuberculosis patient and pathogen genotype data | RENSSELAER POLYTECHNIC INSTITUTE | R01 | 2011 | 0.44 |
| Signature of profiling and staging the progression of TB from infection to disease. | BOSTON UNIVERSITY MEDICAL CAMPUS | R21 | 2020 | 0.43 |

**Cluster 27:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Open Health Natural Language Processing Collaboratory | MAYO CLINIC ROCHESTER | U01 | 2020 | 0.15 |
| Annotation, development and evaluation for clinical information extraction | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2013 | 0.14 |
| Annotation, development and evaluation for clinical information extraction (transfer) | BOSTON CHILDREN'S HOSPITAL | R01 | 2013 | 0.14 |
| Natural language processing for clinical and translational research | MAYO CLINIC ROCHESTER | R01 | 2016 | 0.14 |
| Encoding and Processing Patient Allergy Information in EHRs | BRIGHAM AND WOMEN'S HOSPITAL | R01 | 2016 | 0.13 |

**Cluster 28:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Southern California Clinical Center of the Type 1 Diabetes in Acute Pancreatitis Consortium | CEDARS-SINAI MEDICAL CENTER | U01 | 2020 | 0.2 |
| Validation of Survey Questions to Distinguish Type 1 and Type 2 Diabetes Among Adults With Diabetes | WESTAT, INC. | U01 | 2018 | 0.19 |
| Clinical, Radiologic and Biochemical Factors Related to Diabetes Development after Acute Pancreatitis | JOHNS HOPKINS UNIVERSITY | U01 | 2020 | 0.17 |
| Multi-institutional Consortium for CER in Diabetes Treatment and Prevention | KAISER FOUNDATION RESEARCH INSTITUTE | R01 | 2010 | 0.15 |
| Statistical methods for healthcare in complex patients with diabetes | FRED HUTCHINSON CANCER RESEARCH CENTER | R01 | 2019 | 0.14 |

**Cluster 29:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 | 0.21 |
| Cognitive and social aspects of decision-making | UNIVERSITY OF COLORADO AT COLORADO SPGS | R15 | 2002 | 0.18 |
| Changes in Multimorbidity and Disability Among Race/Ethnic Older Adults (AD/ADRD-Focused Administrative Supplement) | OREGON HEALTH & SCIENCE UNIVERSITY | R01 | 2018 | 0.17 |
| Integrated Web-Based Customer Engagement, Physical Exercise, and Coaching Platform for Older Adults | VIGOROUS MIND, INC. | R43 | 2017 | 0.17 |
| Voice2Connect: Informing the Design of Smart Speakers for Social Connectedness in Low-Income Older Adults | VIRGINIA COMMONWEALTH UNIVERSITY | R03 | 2020 | 0.16 |

**Cluster 30:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Cerebellar connectivity and error-based learning in infants at risk for autism | WASHINGTON UNIVERSITY | F31 | 2020 | 0.23 |
| Investigating quantitative signatures of autism in toddlers | COLUMBIA UNIVERSITY TEACHERS COLLEGE | R01 | 2020 | 0.22 |
| Novel video-based approaches for detection of autism risk in the first year of life | UNIVERSITY OF CALIFORNIA AT DAVIS | R01 | 2020 | 0.21 |
| Adapting Biomarker Assays for Individuals with Autism and Intellectual Disability | YALE UNIVERSITY | R21 | 2020 | 0.2 |
| Neural Correlates of Biological Motion Perception in Children with ASD | SEATTLE CHILDREN'S HOSPITAL | K01 | 2018 | 0.2 |

**Cluster 31:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A New Model of Peptide Fragmentation for Improved Protein Identification and Targ | UNIVERSITY OF COLORADO | R01 | 2015 | 0.17 |
| Improving Diagnosis of Multiple Sclerosis Through the Integration of Novel Imaging and Laboratory Biomarkers | UNIVERSITY OF VERMONT & ST AGRIC COLLEGE | K02 | 2020 | 0.16 |
| Analysis of LC-MS data to identify peptide and glycan biomarkers for hepatocellul | GEORGETOWN UNIVERSITY | R01 | 2014 | 0.15 |
| Intelligent Aids for Proteomic Data Mining | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | K25 | 2008 | 0.14 |
| Sequential Ion/Ion Reactions for Large Peptide and Whole Protein Characterization | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2015 | 0.14 |

**Cluster 32:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Mining health data for drug safety profiles | STANFORD UNIVERSITY | R01 | 2017 | 0.12 |
| Detection of Potential Drug Effect Signals from Twitter Data | PURDUE UNIVERSITY | R15 | 2014 | 0.1 |
| Impacts of a Novel law-enforcement delivered intervention on drug user health | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2020 | 0.1 |
| Mapping the Drugome: predictive network approaches to drug safety surveillance | BOSTON CHILDREN'S HOSPITAL | R00 | 2014 | 0.096 |
| Mining Social Network Postings for Mentions of Potential Adverse Drug Reactions | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | R01 | 2015 | 0.096 |

**Cluster 33:**

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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 | 0.26 |
| Automated Phenotyping in Epilepsy | STANFORD UNIVERSITY | R01 | 2020 | 0.23 |
| Prediction of seizure lateralization and postoperative outcome through the use of deep learning applied to multi-site MRI/DTI data: An ENIGMA-Epilepsy study | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R21 | 2019 | 0.22 |
| Assessment of Peripherally Circulating Plasma Proteins and Clinical Risks to Differentiate Epileptic Seizure from Psychogenic Nonepileptic Seizure | EVOGEN, INC. | R43 | 2019 | 0.2 |
| Characterizing High Frequency Oscillations as an epilepsy biomarker with Big Data tools | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2019 | 0.19 |

**Cluster 34:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Alcohol Use: Nonlinearities in Intraindividual Variables | UNIVERSITY OF SOUTHERN CALIFORNIA | F31 | 2005 | 0.23 |
| Mediators and Moderators of a Neighborhood Experiment on Alcohol Use | UNIVERSITY OF MINNESOTA | R21 | 2017 | 0.23 |
| Alcohol consumption monitoring via a power-free wearable biosensor | LOGICINK CORPORATION | R43 | 2018 | 0.23 |
| Ambulatory assessment of alcohol use, mood dysregulation, and alcohol craving | UNIVERSITY OF MISSOURI-COLUMBIA | R21 | 2014 | 0.22 |
| How Cannabis Use Affects Alcohol Treatment Outcomes | PUBLIC HEALTH INSTITUTE | R21 | 2016 | 0.22 |

**Cluster 35:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Defining the messenger RNP code in the brain | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2016 | 0.081 |
| Programmable RNA-targeting CRISPR-Cas tools to study RNA biology | UNIVERSITY OF ROCHESTER | R35 | 2020 | 0.074 |
| Metal binding sites in macromolecular structures | UNIVERSITY OF VIRGINIA | R01 | 2019 | 0.069 |
| New methods for computational modeling of RNA structures | UNIVERSITY OF MISSOURI-COLUMBIA | R35 | 2020 | 0.056 |
| Understanding RNA interactions through deep learning modeling of high-throughput biophysical measurements | STANFORD UNIVERSITY | F31 | 2018 | 0.055 |

**Cluster 36:**

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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 | 0.46 |
| 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 |
| 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 | 0.39 |
| Environmental Modifications in sub-Saharan Africa: Changing Epidemiology, Transmission and Pathogenesis of Plasmodium falciparum and P. vivax Malaria | UNIVERSITY OF CALIFORNIA-IRVINE | U19 | 2019 | 0.39 |

**Cluster 37:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Comparative Assessment Framework for Environments of Trauma Care | UNIV OF ARKANSAS FOR MED SCIS | R01 | 2019 | 0.064 |
| Automatic Acquisition of Knowledge for Senior Care Planning | MY HEALTH CARE | R44 | 2011 | 0.044 |
| A Training and Fidelity Model to Move and Scale Evidence-based Dementia Care and Caregiver Support Programs into Practice: The Case for COPE in PACE service settings | UNIVERSITY OF PENNSYLVANIA | R01 | 2020 | 0.039 |
| An evaluation of sensor technology to monitor and report compliance with an evidence-based intervention to prevent ventilator-associated pneumonia | JOHNS HOPKINS UNIVERSITY | K23 | 2018 | 0.037 |
| Using Computational Approaches to Optimize Asthma Care Management | UNIVERSITY OF WASHINGTON | R01 | 2020 | 0.036 |

**Cluster 38:**

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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 | 0.24 |
| Informatics Techniques to Optimize Mammography for Aging Populations | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2016 | 0.23 |
| A Noninvasive, Precision Medicine Approach to Improve Breast Cancer Screening Using Cell-free RNA from Saliva. | PRIME GENOMICS, INC. | R43 | 2019 | 0.23 |
| Using Markov Decision Processes to Optimize Breast Biopsy Decision Making | UNIVERSITY OF WISCONSIN-MADISON | R21 | 2009 | 0.23 |
| Breast Cancer Risk Stratification with Resonant Electrical Impedance Spectroscopy | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R33 | 2010 | 0.22 |

**Cluster 39:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Molecular Genetics of HNPCC | UNIVERSITY OF TX MD ANDERSON CAN CTR | R01 | 2011 | 0.066 |
| Polymorphisms in Inflammation Genes and Bladder Cancer Risk | UNIVERSITY OF TX MD ANDERSON CAN CTR | R03 | 2008 | 0.062 |
| Machine Learning Prediction of Cancer Susceptibility | UNIVERSITY OF PENNSYLVANIA | R01 | 2014 | 0.05 |
| Genetic Predisposition To Thoracic Aortic Aneurysms/Dissections | UNIVERSITY OF TEXAS HLTH SCI CTR HOUSTON | R01 | 2020 | 0.05 |
| The Nomenclature of Human and Vertebrate Genes | EUROPEAN MOLECULAR BIOLOGY LABORATORY | U24 | 2020 | 0.047 |

**Cluster 40:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Leveraging National Sleep Research Resource Data for Personalized Sleep Profiling | BRIGHAM AND WOMEN'S HOSPITAL | R01 | 2020 | 0.27 |
| Sleep Health Profiles in Middle-aged Workers in Relation to Cardiovascular and Cognitive Health | UNIVERSITY OF SOUTH FLORIDA | R56 | 2020 | 0.25 |
| 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 | 0.24 |
| Enhanced Measurement and Modeling of Sleep Electrophysiology to Better Understand Sleep Disparities | BRIGHAM AND WOMEN'S HOSPITAL | R21 | 2020 | 0.24 |
| Sleep and Cardiometabolic Health Disparities at the US/Mexico Border: The Nogales Cardiometabolic Health and Sleep (NoCHeS) Study | UNIVERSITY OF ARIZONA | R01 | 2020 | 0.24 |

**Cluster 41:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Statistical Modeling of Complex Traits in Genetic Reference Super-Populations | UNIV OF NORTH CAROLINA CHAPEL HILL | R01 | 2016 | 0.055 |
| Modeling Dimensionality and Genetic Heterogeneity in Schizophrenia | UNIVERSITY OF UTAH | K01 | 2019 | 0.054 |
| Microbial Diversity and Genetic Characterization of Cariogenic Biofilms | NEW YORK UNIVERSITY | R01 | 2012 | 0.049 |
| Fast and Robust Methods for Large Scale Genotype Phenotype Association Study | UNIVERSITY OF CALIFORNIA LOS ANGELES | R01 | 2017 | 0.045 |
| Statistical Modeling of Multiparental and Genetic Reference Populations | UNIV OF NORTH CAROLINA CHAPEL HILL | R35 | 2020 | 0.043 |

**Cluster 42:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Behavioral, Physiological, and Quantitative Models of Pro-Social Behavior | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2018 | 0.046 |
| Socioemotional processing in female offenders - Resubmission 01 | UNIVERSITY OF CHICAGO | R01 | 2020 | 0.043 |
| Real-Time Mobile Cognitive Behavioral Intervention for Serious Mental Illness | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2016 | 0.041 |
| Monitoring and Stabilizing Behavioral Rhythms to Improve Mental Health | HEALTH RHYTHMS, INC. | R44 | 2018 | 0.039 |
| The Center for Neuroscience-based Mental Health Assessment and Prediction (NEUROMAP) | LAUREATE INSTITUTE FOR BRAIN RESEARCH | P20 | 2020 | 0.038 |

**Cluster 43:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Big Data analytics of HIV treatment gaps in South Carolina: Identification and prediction | UNIVERSITY OF SOUTH CAROLINA AT COLUMBIA | R01 | 2020 | 0.31 |
| 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 | 0.29 |
| Defining the impact of injection drug use on antiretroviral therapy and HIV treatment outcomes: an (epi)genomic approach | YALE UNIVERSITY | R01 | 2020 | 0.29 |
| NeuroAIDS in India | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2011 | 0.28 |
| Gene Network Identification and Integration (GNetii) Approach to Understanding the Biology Underlying HIV and Drug Abuse. | RESEARCH TRIANGLE INSTITUTE | R01 | 2020 | 0.28 |

**Cluster 44:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A New Hip Fracture Risk Prediction Tool Based on Common Predictors and Hip Geomer | UNIVERSITY OF ARIZONA | R21 | 2012 | 0.061 |
| Improving the Accuracy of ASCVD Risk Estimation Using Population-Level EHR and Genetic Data | BROWN UNIVERSITY | F30 | 2020 | 0.059 |
| Computerized population Programs for Three Cancer Risks | UNIVERSITY OF RHODE ISLAND | R01 | 2005 | 0.051 |
| Dementia Risk Prediction Pooling Project | NORTHWESTERN UNIVERSITY AT CHICAGO | R61 | 2020 | 0.047 |
| Risk Assessment of Influenza A Viruses | MISSISSIPPI STATE UNIVERSITY | R21 | 2019 | 0.047 |

**Cluster 45:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Genetic & epigenetic analysis of angiogenesis genes in recurrent prostate cancer | H. LEE MOFFITT CANCER CTR & RES INST | R01 | 2012 | 0.3 |
| CLINICAL AND EPIDEMIOLOGICAL CENTER--PROSTATE CANCER | JOHNS HOPKINS UNIVERSITY | U01 | 2004 | 0.3 |
| Gene-Gene Interactions and Their Functional Roles in Prostate Cancer Aggressiveness | LSU HEALTH SCIENCES CENTER | R21 | 2017 | 0.3 |
| MRI Imaging and Biomarkers for Early Detection of Aggressive Prostate Cancer | UNIVERSITY OF MIAMI SCHOOL OF MEDICINE | U01 | 2020 | 0.29 |
| Urinary biomarkers for prostate cancer diagnosis and risk assessment | UNIVERSITY OF TEXAS EL PASO | SC1 | 2020 | 0.26 |

**Cluster 46:**

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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 | 0.32 |
| Sleep apnea after stroke: Implications for screening and treatment | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2019 | 0.3 |
| Fast and Easy Assessment of Stroke | ALVA HEALTH, INC. | R43 | 2019 | 0.3 |
| Whole Transcriptome Studies of Patients with Transient Ischemic Attacks (TIAs) | UNIVERSITY OF CALIFORNIA AT DAVIS | R01 | 2020 | 0.28 |
| MEDIC ONE STROKE SCALE | UNIVERSITY OF WASHINGTON | K23 | 2003 | 0.28 |

**Cluster 47:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Central glutamate signaling in postoperative pain regulation - Renewal | NEW YORK UNIVERSITY SCHOOL OF MEDICINE | R01 | 2020 | 0.37 |
| Measuring Infant Pain Objectively using Sensor Fusion and Machine Learning Algorithms | AUTONOMOUS HEALTHCARE, INC. | R41 | 2018 | 0.37 |
| A Multimodal Approach for Monitoring Prolonged Acute Pain in Neonates | UNIVERSITY OF SOUTH FLORIDA | R21 | 2020 | 0.37 |
| Autonomous Pain Recognition in Non-Verbal and Critically Ill Patients | UNIVERSITY OF FLORIDA | R21 | 2020 | 0.37 |
| Evaluation of Pain in Chronic Pancreatitis using the NAPS2 cohorts | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R21 | 2015 | 0.36 |

**Cluster 48:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Intraocular Robotic Interventional Surgical System for Cataract Surgery Project | UNIVERSITY OF CALIFORNIA LOS ANGELES | R21 | 2015 | 0.14 |
| Impact of Crouch Gait and Surgical Treatment on Knee Mechanics and Function | UNIVERSITY OF WISCONSIN-MADISON | R21 | 2016 | 0.13 |
| Real-time non-intrusive workload monitoring-Integration of human factors in surgery training and assessment | PURDUE UNIVERSITY | R21 | 2020 | 0.12 |
| Quantifying the Metrics of Surgical Mastery: An Exploration in Data Science | STANFORD UNIVERSITY | R01 | 2020 | 0.12 |
| A Virtual Coach to Enhance Surgical Training using Human-Centric Modeling and Adaptive Haptic Guidance | UNIVERSITY OF TEXAS, AUSTIN | R01 | 2020 | 0.12 |

**Cluster 49:**

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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 |
| Machine Learning Algorithms to Measure Physical Activity in Children with Cerebral Palsy | DREXEL UNIVERSITY | R21 | 2017 | 0.22 |
| PAGES: Physical Activity Genomics, Epigenomics/transcriptomics Site | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | U24 | 2020 | 0.2 |
| An Intelligent Physical Activity Monitor | CREARE, INC. | R43 | 2006 | 0.19 |
| Novel Analytic Techniques to Assess Physical Activity | UNIVERSITY OF MASSACHUSETTS AMHERST | R01 | 2010 | 0.19 |

**Cluster 50:**

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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 | 0.17 |
| "Mechanisms of Early Bilingual Language Acquisition" | UNIVERSITY OF CALIFORNIA AT DAVIS | R03 | 2017 | 0.17 |
| Structural and Semantic Cues for the Acquisition of Linguistic Regularties | UNIVERSITY OF WISCONSIN-MADISON | F31 | 2011 | 0.16 |
| Linking Statistical Learning to Vocabulary Development | UNIVERSITY OF CALIFORNIA AT DAVIS | R03 | 2011 | 0.16 |

**Cluster 51:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Detection of Glaucoma Progression with Macular OCT Imaging | UNIVERSITY OF CALIFORNIA LOS ANGELES | K23 | 2016 | 0.39 |
| Functional and Structural Optical Coherence Tomography for Glaucoma | OREGON HEALTH & SCIENCE UNIVERSITY | R01 | 2020 | 0.38 |
| Medical Advice from Glaucoma Informatics (MAGI) | UNIVERSITY OF CALIFORNIA SAN DIEGO | R33 | 2005 | 0.35 |
| A hybrid artificial intelligence framework for glaucoma monitoring | UNIVERSITY OF TENNESSEE HEALTH SCI CTR | R21 | 2020 | 0.34 |
| Diagnostic Innovations in Glaucoma: Clinical Electrophysiology | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R21 | 2008 | 0.33 |

**Cluster 52:**

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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 | 0.14 |
| Perceptual bases of visual concepts | UNIVERSITY OF IOWA | R01 | 2010 | 0.14 |
| Perceptual Organization and Attention: Behavior & fMRI | JOHNS HOPKINS UNIVERSITY | F31 | 2006 | 0.13 |
| Access to parietal action representations after stroke lesions in visual cortex | CARNEGIE-MELLON UNIVERSITY | R01 | 2020 | 0.13 |
| Towards cortical visual prosthetics | BOSTON CHILDREN'S HOSPITAL | R21 | 2010 | 0.13 |

**Cluster 53:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| DNA Sequencing Using Single Molecule Electronics | UNIVERSITY OF CALIFORNIA-IRVINE | R01 | 2019 | 0.065 |
| BioHDF - Open Binary File Standards for Bioinformatics | GEOSPIZA, INC. | R41 | 2005 | 0.065 |
| Machine learning methods to increase genomic accessibility by next-gen sequencing | UNIVERSITY OF CALIFORNIA-IRVINE | R01 | 2014 | 0.058 |
| Informatics Tools for High-Throughput Sequences Data Analysis | BROAD INSTITUTE, INC. | U01 | 2015 | 0.057 |
| New Physical Methodologies for Genomic Analysis | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2014 | 0.051 |

**Cluster 54:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| MODELING DNA METHYLATION'S ROLE IN GENE REGULATION | WASHINGTON UNIVERSITY | R01 | 2018 | 0.082 |
| A MACHINE LEARNING APPROACH FOR FINE-SCALE GENOME WIDE DNA METHYLATION ANALYSIS | WASHINGTON UNIVERSITY | R21 | 2013 | 0.077 |
| Learning Regulatory Drivers of Chromatin and Expression Dynamics during Nuclear Reprogramming | STANFORD UNIVERSITY | R01 | 2019 | 0.071 |
| Epigenome Interactions in Complex Neurogenetic Disorders | WEILL MEDICAL COLL OF CORNELL UNIV | R01 | 2015 | 0.064 |
| Statistical Models in Epigenomics | UNIVERSITY OF SOUTHERN CALIFORNIA | R01 | 2005 | 0.064 |

**Cluster 55:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Integration of endoscopic and CT data for radiation therapy treatment planning | UNIV OF NORTH CAROLINA CHAPEL HILL | R01 | 2018 | 0.18 |
| Decision support for dose prescription in radiation treatment planning | UNIVERSITY OF NORTH CAROLINA CHARLOTTE | R21 | 2013 | 0.16 |
| High-Throughput Computing for a Multi-Plan Framework in Radiotherapy | UNIVERSITY OF MARYLAND BALTIMORE | R01 | 2012 | 0.16 |
| Intelligent treatment planning for cancer radiotherapy | UT SOUTHWESTERN MEDICAL CENTER | R01 | 2020 | 0.14 |
| Automatic Organ Segmentation Tool for Radiation Treatment Planning of Cancers | CARINA MEDICAL, LLC | R44 | 2020 | 0.14 |

**Cluster 56:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Micromachined microphones with in-plane and out-of-plane directivity | SILICON AUDIO, INC. | R44 | 2016 | 0.27 |
| Optimizing Genetic Testing for Deafness for Clinical Diagnostics | UNIVERSITY OF IOWA | R01 | 2020 | 0.26 |
| User-driven fitting of hearing aids and other assistive hearing devices | CARAWAY SOFTWARE, INC. | R43 | 2017 | 0.22 |
| Individualized Signal Processing Strategy to Reduce Hearing Health Care Cost/Disp | SECURBORATION, INC. | R43 | 2014 | 0.19 |
| Mechanisms for invariance in auditory cortex: Investigations with marmoset electrophysiology | COLUMBIA UNIVERSITY HEALTH SCIENCES | F32 | 2020 | 0.18 |

**Cluster 57:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Experimental examinations of the mechanisms that generate the responses of midbra | HARVARD UNIVERSITY | R01 | 2017 | 0.13 |
| Crowd coding in the brain:3D imaging and control of collective neuronal dynamics | UNIV OF MARYLAND, COLLEGE PARK | U01 | 2016 | 0.1 |
| Corticofugal Modulation of Tactile Sensory Processing | DUKE UNIVERSITY | R01 | 2005 | 0.095 |
| A MOLECULAR CODE FOR CONNECTIVITY IN THE NEOCORTEX | BAYLOR COLLEGE OF MEDICINE | R01 | 2016 | 0.094 |
| "Methods from Computational Topology and Geometry for Analysing Neuronal Tree and Graph Data" | COLD SPRING HARBOR LABORATORY | R01 | 2018 | 0.09 |

**Cluster 58:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Multimodal image registration by proxy image synthesis | JOHNS HOPKINS UNIVERSITY | R01 | 2015 | 0.066 |
| Development and Dissemination of MuscleMiner: An Imaging Informatics Tool for Mus | UNIVERSITY OF FLORIDA | R01 | 2018 | 0.055 |
| Continued Development of CellProfiler Cell Image Analysis Software | BROAD INSTITUTE, INC. | R01 | 2016 | 0.055 |
| Development and Dissemination of MuscleMiner: An Imaging Informatics System for Muscle | UNIVERSITY OF FLORIDA | R01 | 2016 | 0.054 |
| Advancing algorithms for image-based profiling | BROAD INSTITUTE, INC. | R35 | 2020 | 0.052 |

**Cluster 59:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Smartband/smartphone-based automatic smoking detection and real time mindfulness intervention | YALE UNIVERSITY | R34 | 2020 | 0.37 |
| An Olfactory Method for Controlling Cigarette Craving | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2017 | 0.33 |
| An Olfactory Method for Controlling Cigarette Craving - Supplement | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2015 | 0.33 |
| Eliminating Tobacco-Related Disparities amount African American Smokers | UNIVERSITY OF UTAH | R01 | 2020 | 0.32 |
| Eliminating Tobacco-Related Disparities among African American Smokers | RICE UNIVERSITY | R01 | 2016 | 0.32 |