**Cluster 0:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| The role of memory reactivation in emotional memory suppression and regulation | PRINCETON UNIVERSITY | F99 | 2020 | 0.18 |
| The effects of film music on neural activity in higher-order brain areas and comprehension for the film narrative | PRINCETON UNIVERSITY | F99 | 2020 | 0.17 |
| Mechanisms of neural circuit dynamics in working memory | PRINCETON UNIVERSITY | U01 | 2016 | 0.16 |
| Using deep brain stimulation of the parietal cortex to investigate the electrophysiology of human episodic memory | UT SOUTHWESTERN MEDICAL CENTER | R01 | 2020 | 0.15 |
| Hippocampal and prefrontal contributions to memory integration | UNIVERSITY OF TEXAS, AUSTIN | R01 | 2019 | 0.15 |

**Cluster 1:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Avoidable Acute Care Use among Patients with Lupus | BRIGHAM AND WOMEN'S HOSPITAL | K23 | 2020 | 0.11 |
| Understanding Functional Connectivity Abnormalities In Individual Patients with Psychosis | MASSACHUSETTS GENERAL HOSPITAL | K01 | 2020 | 0.1 |
| Patient Oriented Research and Mentorship and Training in Functional Neuroimaging of Obsessive-Compulsive Disorder | YALE UNIVERSITY | K24 | 2020 | 0.1 |
| Use of Machine Learning on Integrated Electronic Medical Record, Genetic and Waveform Data to Predict Perioperative Cardiorespiratory Instability | UNIVERSITY OF CALIFORNIA LOS ANGELES | K01 | 2020 | 0.098 |
| Multimodal Biomarkers in Frontotemporal Lobar Degeneration | UNIVERSITY OF PENNSYLVANIA | K01 | 2017 | 0.095 |

**Cluster 2:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Reactome IDG portal: Pathway-based analysis and visualization of understudied human proteins | OREGON HEALTH & SCIENCE UNIVERSITY | U01 | 2020 | 0.12 |
| Computational tools for T- and B-cell epitope prediction | UNIVERSITY OF TEXAS MED BR GALVESTON | R01 | 2010 | 0.092 |
| Dissecting the roles of superchaperones in type III secretion | MASSACHUSETTS GENERAL HOSPITAL | R21 | 2012 | 0.086 |
| The Transporter Classification Database (TCDB) | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2020 | 0.084 |
| Machine learning analysis of tandem mass spectra | UNIVERSITY OF WASHINGTON | R01 | 2014 | 0.083 |

**Cluster 3:**

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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 | 0.36 |
| 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 | 0.35 |
| Big Data Analysis of HIV Risk and Epidemiology in Sub-Saharan Africa | STANFORD UNIVERSITY | R01 | 2020 | 0.35 |
| NeuroAIDS in India | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2011 | 0.34 |
| Defining the impact of injection drug use on antiretroviral therapy and HIV treatment outcomes: an (epi)genomic approach | YALE UNIVERSITY | R01 | 2020 | 0.34 |

**Cluster 4:**

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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 | 0.013 |
| Built Environment Assessment through Computer visiON (BEACON): Applying Deep Learning to Street-Level and Satellite Images to Estimate Built Environment Effects on Cardiovascular Health | HARVARD PILGRIM HEALTH CARE, INC. | R01 | 2020 | 0.012 |
| Optical Body Composition and Health Assessment | UNIVERSITY OF HAWAII AT MANOA | R01 | 2020 | 0.011 |
| An Intelligent Physical Activity Monitor | CREARE, INC. | R43 | 2006 | 0.0066 |
| Temporal Dietary and Physical Activity Patterns Related to Health Outcomes | PURDUE UNIVERSITY | R21 | 2019 | 0.0063 |

**Cluster 5:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Computational Methods for Expression Image Analysis | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | R01 | 2013 | 0.09 |
| PROMOTERS | WASHINGTON UNIVERSITY | R01 | 2018 | 0.089 |
| ANALYSIS OF COMBINATORIAL CIS-REGULATION IN SYNTHETIC AND GENOMIC PROMOTER | WASHINGTON UNIVERSITY | R01 | 2015 | 0.088 |
| Translational Bioinformatics for Human Developmental Genomics | TUFTS UNIVERSITY MEDFORD | R01 | 2012 | 0.086 |
| Placental RNA Expression as a Function of Gestational Age and Environmental Exposures | UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN | R21 | 2017 | 0.084 |

**Cluster 6:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Computational modeling of DNA methylation-mediated gene regulation | WASHINGTON UNIVERSITY | R01 | 2020 | 0.11 |
| Signals of Epigenetic Modification in Sjogrens Syndrome | UNIVERSITY OF CALIFORNIA BERKELEY | F31 | 2018 | 0.1 |
| Defining Genomic Signatures for Aberrant DNA Methylation in Human Cancers | EMORY UNIVERSITY | R01 | 2013 | 0.1 |
| Inferring gene regulatory circuitry from functional genomics data | COLUMBIA UNIV NEW YORK MORNINGSIDE | R01 | 2020 | 0.09 |
| Identification of epigenetic subclones in lymphomas and leukemias | WASHINGTON UNIVERSITY | F30 | 2020 | 0.09 |

**Cluster 7:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Mapping normal developmental coupling between structural and functional brain networks and abnormalities associated with psychosis | UNIVERSITY OF PENNSYLVANIA | F31 | 2018 | 0.073 |
| Longitudinal brain development and clinical outcomes in ADHD from 7-17 years | OREGON HEALTH & SCIENCE UNIVERSITY | R56 | 2016 | 0.072 |
| CONNECTOMICS IN PSYCHIATRIC CLASSIFICATION | WASHINGTON UNIVERSITY | R01 | 2018 | 0.064 |
| Fetal Programming of Human Newborn Energy Homeostasis Brain Networks and Infant Adiposity | UNIVERSITY OF CALIFORNIA-IRVINE | K99 | 2020 | 0.06 |
| Ultra-high field GluCEST MRI and MRS in youth at risk for psychosis | UNIVERSITY OF PENNSYLVANIA | R01 | 2020 | 0.058 |

**Cluster 8:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Towards cortical visual prosthetics | BOSTON CHILDREN'S HOSPITAL | R21 | 2010 | 0.19 |
| Representation of information across the human visual cortex | UNIVERSITY OF CALIFORNIA BERKELEY | R01 | 2018 | 0.17 |
| Perceptual bases of visual concepts | UNIVERSITY OF IOWA | R01 | 2010 | 0.17 |
| Cue Reliability and Depth Calibration During Space Perception | STATE COLLEGE OF OPTOMETRY | R01 | 2011 | 0.17 |
| A Visual Assessment System for Retinal Function/Drug Discovery | AFASCI, INC. | R41 | 2015 | 0.16 |

**Cluster 9:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Intelligent treatment planning for cancer radiotherapy | UT SOUTHWESTERN MEDICAL CENTER | R01 | 2020 | 0.058 |
| An artificial intelligence-driven distributed stereotactic radiosurgery strategy for multiple brain metastases management | UT SOUTHWESTERN MEDICAL CENTER | R01 | 2020 | 0.049 |
| An Automated Patient Chart Error Detection System for Radiation Therapy | INFONDRIAN, LLC | R42 | 2020 | 0.042 |
| Optimal Decision Making in Radiotherapy Using Panomics Analytics | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2020 | 0.041 |
| Personalized Statin Treatment Plan to Optimize Clinical Outcomes Using Big Data | UNIVERSITY OF MINNESOTA | R01 | 2020 | 0.039 |

**Cluster 10:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| UCSC-Buck Inst. Genome Data Analysis Center for TCGA Research Network (GDAC) | UNIVERSITY OF CALIFORNIA SANTA CRUZ | U24 | 2016 | 0.11 |
| Visualization and Analysis of the TCGA Data Using the UCSC Cancer Genomics Browse | UNIVERSITY OF CALIFORNIA SANTA CRUZ | R21 | 2009 | 0.1 |
| Integrative Cancer Genomics: Drivers, Pathways and Drugs | COLUMBIA UNIV NEW YORK MORNINGSIDE | R01 | 2016 | 0.094 |
| A Federated Galaxy for user-friendly large-scale cancer genomics research | OREGON HEALTH & SCIENCE UNIVERSITY | U24 | 2020 | 0.092 |
| Accelerating Cancer Genomics with Cloud-scale Bioconductor | BRIGHAM AND WOMEN'S HOSPITAL | U01 | 2019 | 0.087 |

**Cluster 11:**

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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 | 0.35 |
| Wearable silent speech technology to enhance impaired oral communication | UNIVERSITY OF TEXAS, AUSTIN | R01 | 2020 | 0.33 |
| Objectively Quantifying Speech Outcomes of Children with Cleft Palate | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | R21 | 2019 | 0.33 |
| Multimodal Speech Translation for Assistive Communication | NORTHEASTERN UNIVERSITY | R21 | 2015 | 0.32 |
| Using Speech Acoustics to Reveal Motor Disruptions in Psychosis | NORTHWESTERN UNIVERSITY | R21 | 2020 | 0.32 |

**Cluster 12:**

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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 | 0.19 |
| 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 | 0.16 |
| Protein recognition for modular domains | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2012 | 0.15 |
| High-Accuracy Protein Models Derived from Lower Resolution Data | IOWA STATE UNIVERSITY | R01 | 2009 | 0.15 |

**Cluster 13:**

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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 | 0.34 |
| Fast and Easy Assessment of Stroke | ALVA HEALTH, INC. | R43 | 2019 | 0.32 |
| Sleep apnea after stroke: Implications for screening and treatment | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2019 | 0.32 |
| Whole Transcriptome Studies of Patients with Transient Ischemic Attacks (TIAs) | UNIVERSITY OF CALIFORNIA AT DAVIS | R01 | 2020 | 0.3 |
| Enhancing Stroke Prehospital and Emergency Evaluation and Delivery (E-SPEED) | UNIVERSITY OF CHICAGO | R18 | 2020 | 0.29 |

**Cluster 14:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Pacific Northwest Advanced Compound Identification Core | BATTELLE PACIFIC NORTHWEST LABORATORIES | U2C | 2020 | 0.12 |
| Using machine learning techniques to characterize the Metabolomics Workbench Dataset | TUFTS UNIVERSITY MEDFORD | R03 | 2020 | 0.09 |
| Automated Molecular Identity Disambiguator (AutoMID) | UNIVERSITY OF MIAMI SCHOOL OF MEDICINE | R01 | 2020 | 0.088 |
| Digital representation of chemical mixtures to aid drug discovery and formulation | COLLABORATIVE DRUG DISCOVERY, INC. | R44 | 2020 | 0.082 |
| Classification Algorithms for Chemical Compounds | UNIVERSITY OF MINNESOTA | R01 | 2008 | 0.073 |

**Cluster 15:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Predicting causal non-coding variants in a founder population | STANFORD UNIVERSITY | R01 | 2017 | 0.1 |
| Leveraging Tissue-Specific Regulatory Grammar to Interpret Human Evolution and Non-coding Variation | HARVARD UNIVERSITY | F32 | 2019 | 0.097 |
| High-resolution map of human germline mutation patterns and inference of mutagenic mechanisms | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2019 | 0.088 |
| Discovering Novel Structural Genomic Rearrangements Using Deep Neural Networks | UNIVERSITY OF MICHIGAN AT ANN ARBOR | F31 | 2020 | 0.087 |
| Integrative interpretation of the organismal consequences of non-coding variation | UNIVERSITY OF WASHINGTON | R01 | 2017 | 0.083 |

**Cluster 16:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Applying NLP to Free Text as an EHR Data Capture Method to Improve EHR Usability | ZYDOC MEDICAL TRANSCRIPTION, LLC | R43 | 2012 | 0.15 |
| Semi-supervised Algorithms for Risk Assessment with Noisy EHR Data | HARVARD SCHOOL OF PUBLIC HEALTH | R21 | 2020 | 0.14 |
| National Infrastructure for Standardized and Portable EHR Phenotyping Algorithms | WEILL MEDICAL COLL OF CORNELL UNIV | R01 | 2020 | 0.14 |
| From enrichment to insights | STANFORD UNIVERSITY | R01 | 2020 | 0.13 |
| Better Outcomes for Children: Promoting Excellence in Healthcare Genomics to Inform Policy | CINCINNATI CHILDRENS HOSP MED CTR | U01 | 2019 | 0.13 |

**Cluster 17:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| COMPUTATIONAL THINKING-Automated Reasoning for Application of Clinical | STANFORD UNIVERSITY | N03 | 2010 | 0.073 |
| COMPUTATIONAL THINKING - Combining multiple types of reasoning to infer plausible | CYCORP, INC. | N03 | 2010 | 0.071 |
| COMPUTATIONAL THINKING-Casual Inference on Narrative and Structured Temporal Dat | COLUMBIA UNIVERSITY HEALTH SCIENCES | N03 | 2010 | 0.067 |
| ARTIFICIAL INTELLIGENCE METHODS FOR CRYSTALIZATION | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2001 | 0.066 |
| COMPUTATIONAL THINKING-Computational Thinking to Support Clinicians and Biomedica | SAMSUNG SDS AMERICA, INC. | N03 | 2010 | 0.064 |

**Cluster 18:**

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| --- | --- | --- | --- | --- |
| 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 | 0.31 |
| Assessing ASL CBF as a biomarker for early Alzheimer's disease detection and disease progression | UNIVERSITY OF MARYLAND BALTIMORE | R01 | 2020 | 0.29 |
| Disparities in the Diagnosis of Alzheimer's Disease Among African American and European American Veterans | SEATTLE INST FOR BIOMEDICAL/CLINICAL RES | R56 | 2018 | 0.29 |
| Computational Prediction and Functional Validation of Novel Epigenetic Risk Loci in Alzheimer's Disease | EMORY UNIVERSITY | R56 | 2018 | 0.28 |
| Genetic Predictors, Transcriptomic Biomarkers, & Neurobiological Signatures of Resilience to Alzheimer's Disease | UPSTATE MEDICAL UNIVERSITY | R01 | 2020 | 0.27 |

**Cluster 19:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Next-generation Monte Carlo eXtreme Light Transport Simulation Platform | NORTHEASTERN UNIVERSITY | R01 | 2020 | 0.015 |
| ShapeWorks in the Cloud | UNIVERSITY OF UTAH | R01 | 2020 | 0.014 |
| Scalable Learning with Ensemble Techniques and Parallel Computing | INSILICOS | R44 | 2011 | 0.013 |
| Building an open-source cloud-based computational platform to improve data access | BIODATOMICS, LLC | R43 | 2014 | 0.013 |
| Device for real-time streaming of preclinical research data into a central cloud-based platform | BEHAVIORCLOUD, LLC | R43 | 2018 | 0.01 |

**Cluster 20:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A PERSONAL STATUS MONITOR FOR THE HOME | ALTEC, INC. | R43 | 2000 | 0.055 |
| Non-obtrusive Gait & Fall Monitoring | EMPIRICAL TECHNOLOGIES CORPORATION | R43 | 2010 | 0.051 |
| Wearable-Sensor System for Monitoring Motor Function | BOSTON UNIVERSITY (CHARLES RIVER CAMPUS) | R01 | 2010 | 0.047 |
| Home Sensor Date Fusion to Support Aging in Place | CLEVERSET, INC. | R44 | 2007 | 0.044 |
| Active Power Exoskeleton Device for Spinal Cord Injury | ABILITECH MEDICAL, INC. | R43 | 2017 | 0.043 |

**Cluster 21:**

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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 | 0.43 |
| An Olfactory Method for Controlling Cigarette Craving | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2017 | 0.38 |
| An Olfactory Method for Controlling Cigarette Craving - Supplement | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2015 | 0.38 |
| Smoking Cessation Coach--An Internet Tailoring Program | JOHNS HOPKINS UNIVERSITY | R21 | 2002 | 0.37 |
| Eliminating Tobacco-Related Disparities amount African American Smokers | UNIVERSITY OF UTAH | R01 | 2020 | 0.37 |

**Cluster 22:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Predictive modeling: the role of opioid use in suicide risk | KAISER FOUNDATION RESEARCH INSTITUTE | R01 | 2020 | 0.25 |
| 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 | 0.21 |
| Innovations in Suicide Prevention Research (INSPIRE) | UNIV OF NORTH CAROLINA CHAPEL HILL | R01 | 2020 | 0.2 |
| Using multimodal imaging and the RDoC framework to predict risk factors for suicide attempt | YALE UNIVERSITY | R03 | 2020 | 0.2 |

**Cluster 23:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Structural and Semantic Cues for the Acquisition of Linguistic Regularties | UNIVERSITY OF WISCONSIN-MADISON | F31 | 2011 | 0.22 |
| Statistical Learning in Language Acquisition | UNIVERSITY OF WISCONSIN-MADISON | R37 | 2019 | 0.21 |
| Neurocognitive determinants of adolescent second language literacy development | HASKINS LABORATORIES, INC. | R01 | 2015 | 0.21 |
| The When to Worry about Language Study (W2W-L): Joint consideration of developmental patterning and neural substrates for enhancing earlyidentification of language impairment | NORTHWESTERN UNIVERSITY | R01 | 2020 | 0.2 |
| Linking Language Comprehension to Production Patterns | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2008 | 0.2 |

**Cluster 24:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| West Coast Metabolomics Center for Compound Identification | UNIVERSITY OF CALIFORNIA AT DAVIS | U2C | 2020 | 0.069 |
| Pharmacogenomics of Statin Therapy | CHILDREN'S HOSPITAL & RES CTR AT OAKLAND | P50 | 2019 | 0.068 |
| CORE CENTER FOR CLINICAL RESEACH IN TOTAL JOINT ARTHROPLASTY (CORE-TJA) | MAYO CLINIC ROCHESTER | P30 | 2020 | 0.067 |
| Natural Product-Drug Interaction Research: The Roadmap to Best Practices | WASHINGTON STATE UNIVERSITY | U54 | 2019 | 0.066 |
| Southern California Clinical Center of the Type 1 Diabetes in Acute Pancreatitis Consortium | CEDARS-SINAI MEDICAL CENTER | U01 | 2020 | 0.052 |

**Cluster 25:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A Multisite Neurobehavioral Assessment of Fetal Alcohol Spectrum Disorders | SAN DIEGO STATE UNIVERSITY | U01 | 2020 | 0.3 |
| : Complex systems analysis of the impact of alcohol on bone in non-human primates | OREGON STATE UNIVERSITY | R01 | 2020 | 0.29 |
| Ambulatory assessment of alcohol use, mood dysregulation, and alcohol craving | UNIVERSITY OF MISSOURI-COLUMBIA | R21 | 2014 | 0.29 |
| Alcohol consumption monitoring via a power-free wearable biosensor | LOGICINK CORPORATION | R43 | 2018 | 0.28 |
| Alcohol Use: Nonlinearities in Intraindividual Variables | UNIVERSITY OF SOUTHERN CALIFORNIA | F31 | 2005 | 0.28 |

**Cluster 26:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Sepsis Early Prediction and Subphenotype Illumination Study (SEPSIS) | UNIVERSITY OF CHICAGO | R01 | 2019 | 0.081 |
| Sepsis Early Prediction and Subphenotype Illumination Study (SEPSIS) | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2020 | 0.081 |
| Adverse pregnancy outcomes in women with systemic lupus erythematosus: improving and validating risk prediction | HOSPITAL FOR SPECIAL SURGERY | R21 | 2020 | 0.07 |
| Identifying Electronic Phenotypes associated with Patient Health Outcomes of Interhospital Transfer Patients | CASE WESTERN RESERVE UNIVERSITY | R15 | 2018 | 0.052 |
| Precision antimicrobial stewardship for Clostridioides difficile prevention (PASTCDI) | IHC HEALTH SERVICES, INC. | R03 | 2020 | 0.051 |

**Cluster 27:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Consumer Assessment of Healthcare Providers and Systems V (CAHPS V) | RAND CORPORATION | U18 | 2020 | 0.071 |
| Automatic Acquisition of Knowledge for Senior Care Planning | MY HEALTH CARE | R44 | 2011 | 0.068 |
| Automating assessment of obesity care quality | KAISER FOUNDATION RESEARCH INSTITUTE | R18 | 2011 | 0.054 |
| Identifying Patterns of Health Care Utilization among Physical Elder Abuse Victims Using Medicare Data and Legally Adjudicated Cases | WEILL MEDICAL COLL OF CORNELL UNIV | R01 | 2020 | 0.05 |
| 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 | 0.049 |

**Cluster 28:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Measuring Infant Pain Objectively using Sensor Fusion and Machine Learning Algorithms | AUTONOMOUS HEALTHCARE, INC. | R41 | 2018 | 0.43 |
| Central glutamate signaling in postoperative pain regulation - Renewal | NEW YORK UNIVERSITY SCHOOL OF MEDICINE | R01 | 2020 | 0.42 |
| A Multimodal Approach for Monitoring Prolonged Acute Pain in Neonates | UNIVERSITY OF SOUTH FLORIDA | R21 | 2020 | 0.41 |
| Autonomous Pain Recognition in Non-Verbal and Critically Ill Patients | UNIVERSITY OF FLORIDA | R21 | 2020 | 0.41 |
| Evaluation of Pain in Chronic Pancreatitis using the NAPS2 cohorts | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R21 | 2015 | 0.41 |

**Cluster 29:**

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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 | 0.14 |
| "Methods from Computational Topology and Geometry for Analysing Neuronal Tree and Graph Data" | COLD SPRING HARBOR LABORATORY | R01 | 2018 | 0.12 |
| Exocytosis fuels plasma membrane expansion in developing neurons | UNIV OF NORTH CAROLINA CHAPEL HILL | R01 | 2020 | 0.11 |
| Crowd coding in the brain:3D imaging and control of collective neuronal dynamics | UNIV OF MARYLAND, COLLEGE PARK | U01 | 2016 | 0.11 |
| A MOLECULAR CODE FOR CONNECTIVITY IN THE NEOCORTEX | BAYLOR COLLEGE OF MEDICINE | R01 | 2016 | 0.1 |

**Cluster 30:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| CRCNS: Learning the Neural Code for Prosthetic Control | BROWN UNIVERSITY | R01 | 2006 | 0.073 |
| An Intracortical Brain-Computer Interface Model for High Efficiency Development of Closed-Loop Neural Decoding Algorithms | FLORIDA INTERNATIONAL UNIVERSITY | R01 | 2020 | 0.072 |
| Exploring thalamocortical neural state space for adaptive closed-loop deep brain stimulation of epileptic networks. | STANFORD UNIVERSITY | F31 | 2019 | 0.062 |
| Neural dynamics and adaption for brain machine interface control | STANFORD UNIVERSITY | F31 | 2019 | 0.061 |
| Neurological Control During Brain Recording | BROWN UNIVERSITY | F31 | 2003 | 0.059 |

**Cluster 31:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Genetic Factors in Keratoconus | CEDARS-SINAI MEDICAL CENTER | R01 | 2019 | 0.11 |
| International Case Control Study of Malignant Glioma | BAYLOR COLLEGE OF MEDICINE | R01 | 2015 | 0.11 |
| Genome-Wide Association Analysis of Bladder Cancer | UNIVERSITY OF TX MD ANDERSON CAN CTR | U01 | 2012 | 0.097 |
| Detecting Genome Wide Epistasis with Efficient Bayesian Network Learning | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R00 | 2014 | 0.096 |
| Machine Learning Prediction of Cancer Susceptibility | UNIVERSITY OF PENNSYLVANIA | R01 | 2014 | 0.088 |

**Cluster 32:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Computer-Aided Detection of Urinary Tract Cancer on MDCT Urography | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2014 | 0.11 |
| Digital Mammography: Advanced Computer-Aided Breast Can\* | UNIVERSITY OF MICHIGAN | R01 | 2007 | 0.094 |
| DEVELOPMENT OF COMPUTER BASED TECHNIQUES IN MAMMOGRAPHY | UNIVERSITY OF MICHIGAN | R01 | 2000 | 0.087 |
| Computer-aided Detection of Pulmonary Embolism on CT Pulmonary Angiography | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2012 | 0.086 |
| Information-Theoretic Based CAD in Mammography | DUKE UNIVERSITY | R01 | 2008 | 0.082 |

**Cluster 33:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Distributed networks underlying depression in epilepsy: a computational circuit-based approach to biomarker development | UNIVERSITY OF CALIFORNIA, SAN FRANCISCO | K23 | 2020 | 0.19 |
| An Expert System to Reduce Depression in Primary Care | PRO-CHANGE BEHAVIOR SYSTEMS, INC. | R44 | 2004 | 0.18 |
| Biosignatures of Treatment Remission in Major Depression | COLUMBIA UNIVERSITY HEALTH SCIENCES | U01 | 2015 | 0.18 |
| Predicting Internet-Based Treatment Response for Major Depressive Disorder | MCLEAN HOSPITAL | R56 | 2017 | 0.16 |
| LifeSense: Transforming Behavioral Assessment of Depression Using Personal Sensing Technology | NORTHWESTERN UNIVERSITY AT CHICAGO | R01 | 2020 | 0.16 |

**Cluster 34:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A systems analysis of drug tolerance in Mycobacterium tuberculosis | INSTITUTE FOR SYSTEMS BIOLOGY | R01 | 2020 | 0.18 |
| An Integrative Approach to Drug Repositioning Using Decision Tree Based Machine Learning | WEILL MEDICAL COLL OF CORNELL UNIV | F31 | 2020 | 0.16 |
| Detection of Potential Drug Effect Signals from Twitter Data | PURDUE UNIVERSITY | R15 | 2014 | 0.14 |
| Impacts of a Novel law-enforcement delivered intervention on drug user health | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2020 | 0.14 |
| A multifactorial pipeline to dissect combinatorial drug efficacy in Tuberculosis | UNIVERSITY OF WASHINGTON | R56 | 2020 | 0.13 |

**Cluster 35:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Comprehensive analysis of human adaptive immune receptors to elucidate correlates of Epstein-Barr virus disease suppression | UNIVERSITY OF KANSAS LAWRENCE | DP5 | 2020 | 0.22 |
| A Statistical Physics Framework for Understanding the Role of Repeat RNA in Tumor Immunity | SLOAN-KETTERING INST CAN RESEARCH | U01 | 2020 | 0.18 |
| Blending deep learning with probabilistic mechanistic models to predict and understand the evolution and function of adaptive immune receptors | FRED HUTCHINSON CANCER RESEARCH CENTER | R01 | 2020 | 0.18 |
| Machine Learning for Integrative Modeling of the Immune System in Clinical Settings | STANFORD UNIVERSITY | R35 | 2020 | 0.16 |
| Deciphering the System-Wide Immune Response to Head and Neck Cancer | UNIVERSITY OF CALIFORNIA, SAN FRANCISCO | K23 | 2020 | 0.16 |

**Cluster 36:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Delineating proactive social behaviors in dynamic and multidimensional social space | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | R21 | 2020 | 0.2 |
| Studying how the hippocampal-prefrontal-hypothalamic circuit encodes social dominance | SALK INSTITUTE FOR BIOLOGICAL STUDIES | K99 | 2020 | 0.19 |
| Neural Circuit Mechanisms of Social Homeostasis in Individuals and Supraorganismal Social Groups | SALK INSTITUTE FOR BIOLOGICAL STUDIES | DP1 | 2020 | 0.19 |
| The Molecular Underpinnings of Complex Social Behavior | ROCKEFELLER UNIVERSITY | R35 | 2020 | 0.18 |
| BIGDATA: Small DA Social Behavior Driven Modeling and Optimization of Information | GEORGIA INSTITUTE OF TECHNOLOGY | R01 | 2015 | 0.17 |

**Cluster 37:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Evaluating Longitudinal Changes in the Human Structural Connectome in Relation to Cognitive Aging | UNIVERSITY OF TEXAS, AUSTIN | R01 | 2020 | 0.15 |
| Neural substrates of diffusion imaging in cognitively aging rhesus monkeys | BRIGHAM AND WOMEN'S HOSPITAL | R01 | 2020 | 0.13 |
| Systems Immunology in Aging and Chronic Diseases of Aging | JACKSON LABORATORY | R13 | 2020 | 0.11 |
| Systems Biology of Aging: Data-science meets Gero-science | JACKSON LABORATORY | R13 | 2019 | 0.1 |
| A Strength Analysis Tool for Studying Healthy Aging via Exercise in C. elegans | TEXAS TECH UNIVERSITY | R21 | 2016 | 0.097 |

**Cluster 38:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 | 0.26 |
| Integrated Web-Based Customer Engagement, Physical Exercise, and Coaching Platform for Older Adults | VIGOROUS MIND, INC. | R43 | 2017 | 0.24 |
| Frailty, Statins, and Cardiovascular Disease Burden in Older Adults | HARVARD MEDICAL SCHOOL | R03 | 2019 | 0.24 |
| Cognitive and social aspects of decision-making | UNIVERSITY OF COLORADO AT COLORADO SPGS | R15 | 2002 | 0.24 |
| Multimorbidity and Treatment-Related Outcomes in Older Heart Failure Patients | UNIV OF MASSACHUSETTS MED SCH WORCESTER | R01 | 2020 | 0.24 |

**Cluster 39:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Asthma ascertainment and characterization through electronic health records | MAYO CLINIC ROCHESTER | R01 | 2017 | 0.46 |
| Nasal biomarkers of asthma | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | R01 | 2019 | 0.46 |
| Multi-Omics Analysis of the Association of Polyunsaturated Fatty Acids with Asthma and Allergy in Childhood | BRIGHAM AND WOMEN'S HOSPITAL | K08 | 2020 | 0.41 |
| Multifactorial spatiotemporal analyses to evaluate environmental triggers and patient-level clinical characteristics of severe asthma exacerbations in children | DUKE UNIVERSITY | R21 | 2020 | 0.41 |
| SCH: kHealth: Semantic Multisensory Mobile Approach to Personalized Asthma Care | WRIGHT STATE UNIVERSITY | R01 | 2018 | 0.41 |

**Cluster 40:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| HERCULES: Exposome Research Center | EMORY UNIVERSITY | P30 | 2020 | 0.036 |
| Models for synthesising molecular, clinical and epidemiological data, and transla | U OF L IMPERIAL COL OF SCI/TECHNLGY/MED | U01 | 2018 | 0.029 |
| Data-Driven Statistical Learning with Applications to Genomics | UNIVERSITY OF WASHINGTON | DP5 | 2018 | 0.023 |
| Integrating Bioinformatics and Clustering Analysis for Disease Surveillance | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | F31 | 2018 | 0.021 |
| The Environmental and Human Factors that Determine Ixodes scapularis-borne Diseases Incidence | UNIVERSITY OF PENNSYLVANIA | F31 | 2020 | 0.02 |

**Cluster 41:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Development of Sodium Fluoride PET-MRI for Quantitative Assessment of Knee Osteoarthritis | STANFORD UNIVERSITY | R01 | 2020 | 0.068 |
| A New Paradigm for Integrated Analysis of Multiscale Genomic Imaging Datasets | TULANE UNIVERSITY OF LOUISIANA | R21 | 2010 | 0.056 |
| Brain Cancer Radio-Pathomics for Predicting Heterogeneous Cytology | MEDICAL COLLEGE OF WISCONSIN | R01 | 2020 | 0.056 |
| Next-Generation Ultrasound Localization Microscopy | UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN | R21 | 2020 | 0.056 |
| Quantitative (Perfusion and Diffusion) MRI Biomarkers to Measure Glioma Response | MEDICAL COLLEGE OF WISCONSIN | U01 | 2020 | 0.055 |

**Cluster 42:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Model-guided design of next-generation bacterial therapeutics to treat cardiovascular disease | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2020 | 0.23 |
| Combining chemical and computational tools for predictive models of microbiome communities | UNIVERSITY OF PENNSYLVANIA | R35 | 2020 | 0.22 |
| Bayesian Machine Learning Tools for Analyzing Microbiome Dynamics | BRIGHAM AND WOMEN'S HOSPITAL | R01 | 2020 | 0.19 |
| Joint Analysis of Microbiome and Other Genomic Data Types | FRED HUTCHINSON CANCER RESEARCH CENTER | R01 | 2019 | 0.17 |
| Impact of Gastrointestinal Microbiome on the Host Response to an Effector-Memory T-Cell AIDS Vaccine and Multiple Low-Dose Challenge | NORTH CAROLINA STATE UNIVERSITY RALEIGH | R21 | 2016 | 0.17 |

**Cluster 43:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| New methods for computational modeling of RNA structures | UNIVERSITY OF MISSOURI-COLUMBIA | R35 | 2020 | 0.14 |
| Programmable RNA-targeting CRISPR-Cas tools to study RNA biology | UNIVERSITY OF ROCHESTER | R35 | 2020 | 0.13 |
| The next generation of RNA-Seq simulators for benchmarking analyses | UNIVERSITY OF PENNSYLVANIA | R21 | 2019 | 0.12 |
| Computational genome-wide RNA profiling using next-generation sequencing | UNIVERSITY OF PENNSYLVANIA | R01 | 2016 | 0.11 |
| Structure, function, and dynamics of viral RNAs and RNA-containing complexes | UNIVERSITY OF COLORADO DENVER | R35 | 2020 | 0.11 |

**Cluster 44:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Deviceless and Autonomous Prospective Cardiac CT Triggering | GENERAL ELECTRIC GLOBAL RESEARCH CTR | R01 | 2020 | 0.18 |
| Cardiac CT Deblooming | GENERAL ELECTRIC GLOBAL RESEARCH CTR | R01 | 2020 | 0.14 |
| FAIR-CT: a practical approach to enable ultra-low dose CT for longitudinal disease and treatment monitoring | UNIVERSITY OF UTAH | R21 | 2020 | 0.14 |
| Robust BCT for Clinical Use | O. N. DIAGNOSTICS, LLC | R43 | 2010 | 0.13 |
| System-independent quantitative cardiac CT perfusion | BIOINVISION, INC. | R41 | 2018 | 0.13 |

**Cluster 45:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Exploring Natural Language Processing, Image Processing, Machine Learning, and Us | UNIV OF MASSACHUSETTS MED SCH WORCESTER | R01 | 2015 | 0.091 |
| A Biomedical Natural Language Processing Resource | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2008 | 0.086 |
| Extended Methods and Software Development for Health NLP | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2019 | 0.082 |
| Annotation, development and evaluation for clinical information extraction | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2013 | 0.077 |
| Annotation, development and evaluation for clinical information extraction (transfer) | BOSTON CHILDREN'S HOSPITAL | R01 | 2013 | 0.076 |

**Cluster 46:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Development of clinical decision tools for management of diarrhea of children in high and low resource settings | UNIVERSITY OF UTAH | R01 | 2020 | 0.12 |
| Effect of complex mixtures on oxidative stress and cognition in children | STATE UNIVERSITY OF NEW YORK AT BUFFALO | R01 | 2020 | 0.12 |
| Multi-Site Validation Study of the HLHS Arrest Predictor | BAYLOR COLLEGE OF MEDICINE | R01 | 2020 | 0.12 |
| Machine Learning Algorithms to Measure Physical Activity in Children with Cerebral Palsy | DREXEL UNIVERSITY | R21 | 2017 | 0.11 |
| PREDICTING OUTCOME IN CHILDREN WITH NEW-ONSET TICS USING NEUROIMAGING DATA | WASHINGTON UNIVERSITY | R21 | 2016 | 0.1 |

**Cluster 47:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Cerebellar connectivity and error-based learning in infants at risk for autism | WASHINGTON UNIVERSITY | F31 | 2020 | 0.29 |
| Investigating quantitative signatures of autism in toddlers | COLUMBIA UNIVERSITY TEACHERS COLLEGE | R01 | 2020 | 0.28 |
| Novel video-based approaches for detection of autism risk in the first year of life | UNIVERSITY OF CALIFORNIA AT DAVIS | R01 | 2020 | 0.26 |
| Co-occurring ADHD in young children with ASD: Precursors, detection, neural signatures, and early treatment | DUKE UNIVERSITY | P50 | 2020 | 0.26 |
| Neural Correlates of Biological Motion Perception in Children with ASD | SEATTLE CHILDREN'S HOSPITAL | K01 | 2018 | 0.25 |

**Cluster 48:**

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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 | 0.25 |
| Genetic & epigenetic analysis of angiogenesis genes in recurrent prostate cancer | H. LEE MOFFITT CANCER CTR & RES INST | R01 | 2012 | 0.25 |
| MRI Imaging and Biomarkers for Early Detection of Aggressive Prostate Cancer | UNIVERSITY OF MIAMI SCHOOL OF MEDICINE | U01 | 2020 | 0.24 |
| CLINICAL AND EPIDEMIOLOGICAL CENTER--PROSTATE CANCER | JOHNS HOPKINS UNIVERSITY | U01 | 2004 | 0.24 |
| High speed automated intraoperative microscopy of the prostate circumference to ensure tumor-free margins in radical prostatectomy | TULANE UNIVERSITY OF LOUISIANA | R01 | 2020 | 0.23 |

**Cluster 49:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 | 0.27 |
| Using Markov Decision Processes to Optimize Breast Biopsy Decision Making | UNIVERSITY OF WISCONSIN-MADISON | R21 | 2009 | 0.26 |
| Informatics Techniques to Optimize Mammography for Aging Populations | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2016 | 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 |
| Breast Cancer Risk Stratification with Resonant Electrical Impedance Spectroscopy | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R33 | 2010 | 0.25 |

**Cluster 50:**

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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 | 0.17 |
| Impact of Crouch Gait and Surgical Treatment on Knee Mechanics and Function | UNIVERSITY OF WISCONSIN-MADISON | R21 | 2016 | 0.17 |
| Quantifying the Metrics of Surgical Mastery: An Exploration in Data Science | STANFORD UNIVERSITY | R01 | 2020 | 0.16 |
| Data-Driven Framework for Classification and Surgical Planning of Spinal Deformity. | CHILDREN'S HOSP OF PHILADELPHIA | R21 | 2020 | 0.16 |
| Real-time non-intrusive workload monitoring-Integration of human factors in surgery training and assessment | PURDUE UNIVERSITY | R21 | 2020 | 0.15 |

**Cluster 51:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Developing and validating prognostic metabolomic signatures of diabetic kidney disease | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2020 | 0.29 |
| Development and Validation of Computational Algorithms to Assess Kidney Health in Electronic Health Records | UNIVERSITY OF FLORIDA | K01 | 2020 | 0.27 |
| Prediction of Major Adverse Kidney Events and Recovery (Pred-MAKER) in COVID-19 Patients | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | R01 | 2020 | 0.25 |
| 2019 STONE LAB SCIENTIFIC SYMPOSIUM: THINKING OUTSIDE THE BOX FOR KIDNEY STONE DISEASE | AMERICAN UROLOGICAL ASSOCIATION | U13 | 2019 | 0.24 |
| Understanding the role of the Complement Proteome in progressive Diabetic Kidney Disease | JOSLIN DIABETES CENTER | R01 | 2020 | 0.22 |

**Cluster 52:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Administrative Supplement Request for Transforming Analytical Learning in the Era of Big Data | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R25 | 2016 | 0.21 |
| Transforming Analytical Learning in the Era of Big Data | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R25 | 2020 | 0.21 |
| Big Data Coursework for Computational Medicine | WEILL MEDICAL COLL OF CORNELL UNIV | R25 | 2016 | 0.2 |
| Fisk University/UIUC-Mayo KnowENG BD2K Center R25 Partnership | FISK UNIVERSITY | R25 | 2019 | 0.19 |
| Summer Institute for Statistics of Big Data | UNIVERSITY OF WASHINGTON | R25 | 2016 | 0.16 |

**Cluster 53:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Defining cell types, lineage, and connectivity in developing human fetal cortex | UNIVERSITY OF CALIFORNIA LOS ANGELES | U01 | 2016 | 0.12 |
| Dissecting the mechanism of cell migration at the systems level | CARNEGIE-MELLON UNIVERSITY | R35 | 2020 | 0.12 |
| In situ transcriptome profiling in single cells | CALIFORNIA INSTITUTE OF TECHNOLOGY | UH3 | 2020 | 0.12 |
| Systems Analysis of cell type differentiation in Xenopus development | HARVARD MEDICAL SCHOOL | R01 | 2020 | 0.11 |
| Cell line identification with DNA replication timing fingerprints | INSILICOM, LLC | R43 | 2019 | 0.11 |

**Cluster 54:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 | 0.28 |
| Improving Diagnosis of Multiple Sclerosis Through the Integration of Novel Imaging and Laboratory Biomarkers | UNIVERSITY OF VERMONT & ST AGRIC COLLEGE | K02 | 2020 | 0.27 |
| Analysis of LC-MS data to identify peptide and glycan biomarkers for hepatocellul | GEORGETOWN UNIVERSITY | R01 | 2014 | 0.25 |
| Prediction of risk of disability worsening and inflammatory disease activity in MS utilizing multimodal prediction algorithms | JOHNS HOPKINS UNIVERSITY | K23 | 2020 | 0.23 |
| Sequential Ion/Ion Reactions for Large Peptide and Whole Protein Characterization | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2015 | 0.23 |

**Cluster 55:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Automated Facial Expression Analysis for Research and Clinical Use | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2016 | 0.23 |
| A Study of the Computational Space of Facial Expressions of Emotion | OHIO STATE UNIVERSITY | R01 | 2014 | 0.21 |
| FACIAL EXPRESSION ANALYSIS BY IMAGE PROCESSING | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2005 | 0.2 |
| Multi-feature modeling of the neural representation of emotion- and identity-related information derived from facial and vocal cues | UNIVERSITY OF CALIFORNIA BERKELEY | R01 | 2019 | 0.19 |
| COMPUTER VISION ANALYSIS OF DYNAMIC FACIAL BEHAVIOR | UNIVERSITY OF CALIFORNIA SAN DIEGO | F32 | 2001 | 0.19 |

**Cluster 56:**

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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 | 0.26 |
| Histopathology correlated quantitative analysis of lung nodules with LDCT for early detection of lung cancer | UNIVERSITY OF MICHIGAN AT ANN ARBOR | U01 | 2020 | 0.26 |
| Lung cancer in East Africa and the relationship to HIV-1 infection: epidemiology, molecular characterization and imaging | CASE WESTERN RESERVE UNIVERSITY | U54 | 2020 | 0.26 |
| High Density Association Analysis of Lung Cancer | UNIVERSITY OF TX MD ANDERSON CAN CTR | R01 | 2010 | 0.25 |
| EARLY DETECTION OF LUNG CANCER USING METABOLOMIC LIPID PROFILING | RUSH UNIVERSITY MEDICAL CENTER | R21 | 2014 | 0.25 |

**Cluster 57:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| A Non-invasive Single-trial In-vivo Neuroimaging System | COLUMBIA UNIV NEW YORK MORNINGSIDE | R33 | 2007 | 0.16 |
| Real-Time Automated Detection of Craving States with fMRI and EEG | UNIVERSITY OF CALIFORNIA LOS ANGELES | R33 | 2012 | 0.13 |
| EEGLAB: Software for Analysis of Human Brain Dynamics | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2020 | 0.12 |
| New Wavelet-based and Source Separation Methods for fMRI | PRINCETON UNIVERSITY | R01 | 2006 | 0.12 |
| Fusion of Electromagnetic Brain Imaging and fMRI | UNIVERSITY OF CALIFORNIA, SAN FRANCISCO | R21 | 2012 | 0.11 |

**Cluster 58:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Providing Access to Appliance Displays for Visually Impaired Users | SMITH-KETTLEWELL EYE RESEARCH INSTITUTE | R01 | 2015 | 0.094 |
| Locating and Reading Informational Signs | UNIVERSITY OF CALIFORNIA LOS ANGELES | R01 | 2004 | 0.093 |
| Enabling Audio-Haptic Interaction with Physical Objects for the Visually Impaired | SMITH-KETTLEWELL EYE RESEARCH INSTITUTE | R01 | 2019 | 0.084 |
| Mobile Search for the Visually Impaired | IQ ENGINES, INC. | R44 | 2013 | 0.081 |
| SIGN FINDER: COMPUTER VISION TO FIND AND READ SIGNS | BLINDSIGHT CORPORATION | R43 | 2000 | 0.08 |

**Cluster 59:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 | 0.4 |
| Cardiovascular implications of sleep characteristics using real-world objective sleep data | UNIVERSITY OF WASHINGTON | R21 | 2020 | 0.4 |
| Enhanced Measurement and Modeling of Sleep Electrophysiology to Better Understand Sleep Disparities | BRIGHAM AND WOMEN'S HOSPITAL | R21 | 2020 | 0.39 |
| 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 | 0.38 |
| Sleep Health Profiles in Middle-aged Workers in Relation to Cardiovascular and Cognitive Health | UNIVERSITY OF SOUTH FLORIDA | R56 | 2020 | 0.37 |