**Cluster 0:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Protege: A Knowledge-Engineering Environment for Advancing Biomedical Sciences | STANFORD UNIVERSITY | R01 | 2020 | 0.061 |
| National Center for Biomedical Ontology | STANFORD UNIVERSITY | U54 | 2014 | 0.061 |
| A Resource for Biomedical Ontologies and Knowledge Bases | STANFORD UNIVERSITY | P41 | 2010 | 0.053 |
| Automated Knowledge Extraction for Biomedical Literature | BRANDEIS UNIVERSITY | R01 | 2006 | 0.052 |
| Knowledge-Based Biomedical Data Science | UNIVERSITY OF COLORADO DENVER | R01 | 2020 | 0.049 |

**Cluster 1:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Computational Methods for Expression Image Analysis | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | R01 | 2013 | 0.098 |
| Integrated SNP, gene expression and proteomic analysis | EPICENTER SOFTWARE | R44 | 2005 | 0.092 |
| Translational Bioinformatics for Human Developmental Genomics | TUFTS UNIVERSITY MEDFORD | R01 | 2012 | 0.086 |
| Deciphering cellular signaling system by deep mining a comprehensive genomic compendium | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2018 | 0.085 |
| Placental RNA Expression as a Function of Gestational Age and Environmental Exposures | UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN | R21 | 2017 | 0.081 |

**Cluster 2:**

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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 | 0.26 |
| Using Markov Decision Processes to Optimize Breast Biopsy Decision Making | UNIVERSITY OF WISCONSIN-MADISON | R21 | 2009 | 0.25 |
| A Noninvasive, Precision Medicine Approach to Improve Breast Cancer Screening Using Cell-free RNA from Saliva. | PRIME GENOMICS, INC. | R43 | 2019 | 0.25 |
| Informatics Techniques to Optimize Mammography for Aging Populations | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2016 | 0.25 |
| Convergent AI for Precise Breast Cancer Risk Assessment | METHODIST HOSPITAL RESEARCH INSTITUTE | R01 | 2020 | 0.25 |

**Cluster 3:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Decision Support in the Care of Preterm Newborns-Tool Development | MEDICAL UNIVERSITY OF SOUTH CAROLINA | R21 | 2009 | 0.09 |
| TREAT ECARDS: Translating Evidence into Action: Electronic Clinical Decision Support in ARDS | ALBERT EINSTEIN COLLEGE OF MEDICINE | R18 | 2020 | 0.079 |
| Measuring real time decision-making about UVR Protection | SLOAN-KETTERING INST CAN RESEARCH | R21 | 2010 | 0.078 |
| Design and Evaluation of a Decision Support Engine for Advanced Treatment of Type 1 Diabetes | OREGON HEALTH & SCIENCE UNIVERSITY | F31 | 2020 | 0.075 |
| Statistical methods for real-time forecasts of infectious disease: dynamic time-series and machine learning approaches | UNIVERSITY OF MASSACHUSETTS AMHERST | R35 | 2020 | 0.063 |

**Cluster 4:**

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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 | 0.34 |
| Big Data Analysis of HIV Risk and Epidemiology in Sub-Saharan Africa | STANFORD UNIVERSITY | R01 | 2020 | 0.33 |
| NeuroAIDS in India | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2011 | 0.33 |
| Defining the impact of injection drug use on antiretroviral therapy and HIV treatment outcomes: an (epi)genomic approach | YALE UNIVERSITY | R01 | 2020 | 0.33 |

**Cluster 5:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Very large datasets and new models to predict and design protein interactions | MASSACHUSETTS INSTITUTE OF TECHNOLOGY | R01 | 2014 | 0.17 |
| Protein recognition for modular domains | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2012 | 0.16 |
| Nonparametric Analysis of Reverse-Phase Protein Lysate Array Data | UNIVERSITY OF TX MD ANDERSON CAN CTR | R21 | 2010 | 0.15 |
| Proteomics of ciliopathy protein complexes | UNIVERSITY OF TEXAS, AUSTIN | F31 | 2019 | 0.14 |
| Integrative computational framework for pattern mining in big -omics data: linking synonymous codon usage to protein biogenesis | UNIVERSITY OF NOTRE DAME | R01 | 2019 | 0.14 |

**Cluster 6:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Visualization and Analysis of the TCGA Data Using the UCSC Cancer Genomics Browse | UNIVERSITY OF CALIFORNIA SANTA CRUZ | R21 | 2009 | 0.1 |
| A Federated Galaxy for user-friendly large-scale cancer genomics research | OREGON HEALTH & SCIENCE UNIVERSITY | U24 | 2020 | 0.086 |
| UCSC-Buck Inst. Genome Data Analysis Center for TCGA Research Network (GDAC) | UNIVERSITY OF CALIFORNIA SANTA CRUZ | U24 | 2016 | 0.083 |
| MICRORNA BIOMARKERS FOR OROPHARYNGEAL CANCER | UNIVERSITY OF ILLINOIS AT CHICAGO | R01 | 2020 | 0.083 |
| Stephenson Cancer Center - Cancer Center Support Grant | UNIVERSITY OF OKLAHOMA HLTH SCIENCES CTR | P30 | 2020 | 0.079 |

**Cluster 7:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Non-Invasive System for Identifying Neural Behavior | ALTEC, INC. | R01 | 2009 | 0.11 |
| Motor Learning for the Control of an Assistive Device | REHABILITATION INSTITUTE OF CHICAGO D/B/A SHIRLEY RYAN ABILITYLAB | R21 | 2008 | 0.11 |
| The neural workings of self-initiated and quasi-automatic movements | COLUMBIA UNIVERSITY HEALTH SCIENCES | F32 | 2016 | 0.11 |
| Enabling forelimb function with agonist drug and epidural stimulation in SCI | UNIVERSITY OF CALIFORNIA LOS ANGELES | U01 | 2017 | 0.11 |
| Defining the anatomical, molecular and functional logic of internal copy circuits involved in dexterous forelimb behaviors | SALK INSTITUTE FOR BIOLOGICAL STUDIES | R01 | 2020 | 0.11 |

**Cluster 8:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Cerebellar connectivity and error-based learning in infants at risk for autism | WASHINGTON UNIVERSITY | F31 | 2020 | 0.28 |
| Investigating quantitative signatures of autism in toddlers | COLUMBIA UNIVERSITY TEACHERS COLLEGE | R01 | 2020 | 0.26 |
| Novel video-based approaches for detection of autism risk in the first year of life | UNIVERSITY OF CALIFORNIA AT DAVIS | R01 | 2020 | 0.25 |
| Co-occurring ADHD in young children with ASD: Precursors, detection, neural signatures, and early treatment | DUKE UNIVERSITY | P50 | 2020 | 0.25 |
| Adapting Biomarker Assays for Individuals with Autism and Intellectual Disability | YALE UNIVERSITY | R21 | 2020 | 0.24 |

**Cluster 9:**

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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 | 0.32 |
| Assessing ASL CBF as a biomarker for early Alzheimer's disease detection and disease progression | UNIVERSITY OF MARYLAND BALTIMORE | R01 | 2020 | 0.3 |
| Manifold-valued statistical models for longitudinal morphometic analysis in preclinical Alzheimer's disease (AD) | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2018 | 0.28 |
| Using connectomics to characterize risk for Alzheimer's Disease | MEDICAL UNIVERSITY OF SOUTH CAROLINA | R01 | 2020 | 0.28 |
| Disparities in the Diagnosis of Alzheimer's Disease Among African American and European American Veterans | SEATTLE INST FOR BIOMEDICAL/CLINICAL RES | R56 | 2018 | 0.28 |

**Cluster 10:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Fast and Robust Methods for Large Scale Genotype Phenotype Association Study | UNIVERSITY OF CALIFORNIA LOS ANGELES | R01 | 2017 | 0.036 |
| Whole-Genome Prediction of Type-2 Diabetes Susceptibility in Various Populations | UNIVERSITY OF ARIZONA | K01 | 2014 | 0.036 |
| THE STANFORD PHARMACOGENETICS KNOWLEDGE BASE | STANFORD UNIVERSITY | U01 | 2004 | 0.036 |
| Deep Learning Based Genetic Risk Prediction for Type 1 Diabetes | AUGUSTA UNIVERSITY | F30 | 2020 | 0.035 |
| Understanding modifiers of mendelian mutation penetrance using familial hypercholesterolemia as a model | MASSACHUSETTS GENERAL HOSPITAL | K08 | 2019 | 0.035 |

**Cluster 11:**

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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 | 0.031 |
| Ancillary Comparative Effectiveness of Atrial Fibrillation Ablation Surgery | CLEVELAND CLINIC LERNER COM-CWRU | R01 | 2014 | 0.029 |
| Secure Homomorphically Encrypted National Registry of COVID-19 Recovered Plasma Donors | ELIMU INFORMATICS, INC. | R41 | 2020 | 0.026 |
| Reliable Seizure Prediction Using Physiological Signals and Machine Learning | MAYO CLINIC ROCHESTER | R01 | 2019 | 0.026 |
| Development of Models for the Prediction of Ventilator-Associated Conditions in the Hospital Setting | ORIGENT DATA SCIENCES, INC. | R43 | 2017 | 0.026 |

**Cluster 12:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Fluomics: The Next Generation | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | U19 | 2020 | 0.013 |
| Combining chemical and computational tools for predictive models of microbiome communities | UNIVERSITY OF PENNSYLVANIA | R35 | 2020 | 0.012 |
| Transmission Networks in Trait-Based Communities | CORNELL UNIVERSITY | R01 | 2019 | 0.012 |
| Elucidating host phosphosignaling regulation of Plasmodium vivax liver stage | SEATTLE CHILDREN'S HOSPITAL | R21 | 2020 | 0.0076 |
| Model-guided design of next-generation bacterial therapeutics to treat cardiovascular disease | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2020 | 0.0055 |

**Cluster 13:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| iTransform: Wearable Biosensors to Detect the Evolution of Opioid Tolerance in Opioid Naïve Individuals | UNIV OF MASSACHUSETTS MED SCH WORCESTER | K23 | 2020 | 0.32 |
| Using Machine Learning to Predict Problematic Prescription Opioid Use and Opioid Overdose | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2019 | 0.31 |
| Real-time fMRI neurofeedback of large-scale network dynamics in opioid use disorder | YALE UNIVERSITY | R21 | 2020 | 0.29 |
| THE PRIMARY OBJECTIVE OF THE PROPOSED PHASE I WORK IS TO FURTHER DEVELOP A PROOF-OF-CONCEPT (POC) MACHINE LEARNING APPROACH TO DETECT ILLEGAL OPIOID SELLERS AND DEVELOP IT INTO AN MVP THAT CAN COLLEC | S-3 RESEARCH, LLC | N43 | 2019 | 0.29 |
| Telemedicine for Treatment of Opioid Use Disorder | HARVARD MEDICAL SCHOOL | R01 | 2020 | 0.28 |

**Cluster 14:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Language and Learning | UNIVERSITY OF CALIFORNIA SANTA CRUZ | F31 | 2003 | 0.12 |
| IGF::CL::IGF MEETING SUPPORT FOR THE NATURAL LANGUAGE PROCESSING WORKSHOP OCTOBER 8, 2015. | SCIENTIFIC CONSULTING GROUP, INC. | N03 | 2015 | 0.11 |
| Structural and Semantic Cues for the Acquisition of Linguistic Regularties | UNIVERSITY OF WISCONSIN-MADISON | F31 | 2011 | 0.11 |
| Neurocognitive determinants of adolescent second language literacy development | HASKINS LABORATORIES, INC. | R01 | 2015 | 0.11 |
| Linking Language Comprehension to Production Patterns | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2008 | 0.11 |

**Cluster 15:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| : 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 | 0.28 |
| Alcohol Use: Nonlinearities in Intraindividual Variables | UNIVERSITY OF SOUTHERN CALIFORNIA | F31 | 2005 | 0.27 |
| Mediators and Moderators of a Neighborhood Experiment on Alcohol Use | UNIVERSITY OF MINNESOTA | R21 | 2017 | 0.27 |
| Alcohol consumption monitoring via a power-free wearable biosensor | LOGICINK CORPORATION | R43 | 2018 | 0.26 |

**Cluster 16:**

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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 | 0.36 |
| Wearable silent speech technology to enhance impaired oral communication | UNIVERSITY OF TEXAS, AUSTIN | R01 | 2020 | 0.32 |
| Objectively Quantifying Speech Outcomes of Children with Cleft Palate | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | R21 | 2019 | 0.32 |
| Perception of dysarthric speech: An objective model of dysarthric speech evaluation with actionable outcomes | ARIZONA STATE UNIVERSITY-TEMPE CAMPUS | R01 | 2020 | 0.32 |
| Multimodal Speech Translation for Assistive Communication | NORTHEASTERN UNIVERSITY | R21 | 2015 | 0.31 |

**Cluster 17:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 | 0.42 |
| Cardiovascular implications of sleep characteristics using real-world objective sleep data | UNIVERSITY OF WASHINGTON | R21 | 2020 | 0.41 |
| Enhanced Measurement and Modeling of Sleep Electrophysiology to Better Understand Sleep Disparities | BRIGHAM AND WOMEN'S HOSPITAL | R21 | 2020 | 0.4 |
| Sleep Health Profiles in Middle-aged Workers in Relation to Cardiovascular and Cognitive Health | UNIVERSITY OF SOUTH FLORIDA | R56 | 2020 | 0.39 |
| Sleep and Cardiometabolic Health Disparities at the US/Mexico Border: The Nogales Cardiometabolic Health and Sleep (NoCHeS) Study | UNIVERSITY OF ARIZONA | R01 | 2020 | 0.39 |

**Cluster 18:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| New Physical Methodologies for Genomic Analysis | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2014 | 0.071 |
| Genomic Database for the Yeast Saccharomyces | STANFORD UNIVERSITY | U41 | 2015 | 0.063 |
| Informatics Tools for High-Throughput Sequences Data Analysis | BROAD INSTITUTE, INC. | U01 | 2015 | 0.044 |
| Selective Whole Genome Amplification - Enabling Microbial Population Genomics | UNIVERSITY OF PENNSYLVANIA | R21 | 2019 | 0.044 |
| POPULATION GENOMICS OF ADAPTATION | UNIVERSITY OF OREGON | R01 | 2020 | 0.044 |

**Cluster 19:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Continued development of CellProfiler cell image analysis software | BROAD INSTITUTE, INC. | R01 | 2013 | 0.064 |
| Continued Development of CellProfiler Cell Image Analysis Software | BROAD INSTITUTE, INC. | R01 | 2016 | 0.061 |
| Advancing algorithms for image-based profiling | BROAD INSTITUTE, INC. | R35 | 2020 | 0.06 |
| Extracting rich information from biological images | BROAD INSTITUTE, INC. | R35 | 2018 | 0.058 |
| Intelligent and Automatic Image Segmentation Software for High ThroughputAnalysi | CYTOINFORMATICS, LLC | R41 | 2014 | 0.055 |

**Cluster 20:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| ABCD-USA Consortium: Research Project | UNIVERSITY OF CALIFORNIA, SAN DIEGO | U01 | 2019 | 0.079 |
| Assisted Identification and Navigation of Early Mental Health Symptoms in Youth | KAISER FOUNDATION RESEARCH INSTITUTE | R56 | 2018 | 0.076 |
| ABCD-USA Consortium:Research Project | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | U01 | 2019 | 0.07 |
| Real-Time Mobile Cognitive Behavioral Intervention for Serious Mental Illness | UNIVERSITY OF CALIFORNIA, SAN DIEGO | R01 | 2016 | 0.069 |
| Deep machine learning to delineate trajectories of vulnerability and transition to mental illness in youth | UNIVERSITY OF WASHINGTON | K99 | 2020 | 0.067 |

**Cluster 21:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Computerized Radiographic Analysis of Bone Structure | UNIVERSITY OF CHICAGO | R01 | 2005 | 0.075 |
| Improved algorithms for macromolecular structure determination by cryo-EM and NMR | PRINCETON UNIVERSITY | R01 | 2013 | 0.06 |
| Annotating Functional Sites in 3D Biological Structures | STANFORD UNIVERSITY | R01 | 2013 | 0.058 |
| Predictions of structure/function by PredictProtein | COLUMBIA UNIVERSITY HEALTH SCIENCES | R01 | 2003 | 0.058 |
| VIRUS STRUCTURE DETERMINATION SOFTWARE | QED LABS | R44 | 2002 | 0.056 |

**Cluster 22:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Accelerating Curation of GWAS Catalog by Automatic Text Mining | UNIVERSITY OF CALIFORNIA, SAN DIEGO | U01 | 2015 | 0.2 |
| Detecting Genome Wide Epistasis with Efficient Bayesian Network Learning | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R00 | 2014 | 0.2 |
| Genetic Factors in Keratoconus | CEDARS-SINAI MEDICAL CENTER | R01 | 2019 | 0.19 |
| An integrative approach to functionalize GWAS hits in MI and stroke | THOMAS JEFFERSON UNIVERSITY | R01 | 2018 | 0.17 |
| IBD Gene Mapping by Clinical and Population Subset | RBHS-ROBERT WOOD JOHNSON MEDICAL SCHOOL | U01 | 2020 | 0.16 |

**Cluster 23:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Big Data Coursework for Computational Medicine | WEILL MEDICAL COLL OF CORNELL UNIV | R25 | 2016 | 0.24 |
| Fisk University/UIUC-Mayo KnowENG BD2K Center R25 Partnership | FISK UNIVERSITY | R25 | 2019 | 0.21 |
| Administrative Supplement Request for Transforming Analytical Learning in the Era of Big Data | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R25 | 2016 | 0.2 |
| Summer Institute for Statistics of Big Data | UNIVERSITY OF WASHINGTON | R25 | 2016 | 0.18 |
| Developing Cloud-based tools for Big Neural Data | UNIVERSITY OF PENNSYLVANIA | K01 | 2015 | 0.17 |

**Cluster 24:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Building a classroom game economy to improve mathematical reasoning and prepare K-5 students for success in STEM learning | TEACHLEY, LLC | R44 | 2020 | 0.24 |
| An interactive, digital platform to transform biological learning | SQUID BOOKS, LLC | R44 | 2020 | 0.24 |
| An interactive, digital platform to transform physical science learning | SQUID BOOKS, LLC | R44 | 2020 | 0.23 |
| MUSC Minority Student Development Program | MEDICAL UNIVERSITY OF SOUTH CAROLINA | R25 | 2008 | 0.23 |
| MBRS IMSD Program at the University of Kansas | UNIVERSITY OF KANSAS LAWRENCE | R25 | 2008 | 0.23 |

**Cluster 25:**

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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 | 0.17 |
| 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 |
| Novel computational approaches to predict drug response and combination effects | UT SOUTHWESTERN MEDICAL CENTER | R35 | 2020 | 0.13 |
| A multifactorial pipeline to dissect combinatorial drug efficacy in Tuberculosis | UNIVERSITY OF WASHINGTON | R56 | 2020 | 0.13 |

**Cluster 26:**

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| --- | --- | --- | --- | --- |
| 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 | 0.15 |
| Frailty, Statins, and Cardiovascular Disease Burden in Older Adults | HARVARD MEDICAL SCHOOL | R03 | 2019 | 0.15 |
| Uncovering and Surveilling Financial Deception Risk in Aging (Alzheimer's Disease Supplement to 1R01AG057764-01A1) | UNIVERSITY OF FLORIDA | R01 | 2019 | 0.14 |
| Uncovering and Surveilling Financial Deception Risk in Aging | UNIVERSITY OF FLORIDA | R01 | 2020 | 0.14 |
| Investigating Sedentary Time In Aging: New Directions Using Technology (iSTAND) | KAISER FOUNDATION HEALTH PLAN OF WASHINGTON | K23 | 2017 | 0.13 |

**Cluster 27:**

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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 |
| From enrichment to insights | STANFORD UNIVERSITY | R01 | 2020 | 0.14 |
| Patient Medical History Representation, Extraction, and Inference from EHR Data | UNIVERSITY OF TEXAS HLTH SCI CTR HOUSTON | R01 | 2018 | 0.13 |
| National Infrastructure for Standardized and Portable EHR Phenotyping Algorithms | WEILL MEDICAL COLL OF CORNELL UNIV | R01 | 2020 | 0.13 |

**Cluster 28:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Identification of epigenetic subclones in lymphomas and leukemias | WASHINGTON UNIVERSITY | F30 | 2020 | 0.29 |
| Defining Genomic Signatures for Aberrant DNA Methylation in Human Cancers | EMORY UNIVERSITY | R01 | 2013 | 0.29 |
| Signals of Epigenetic Modification in Sjogrens Syndrome | UNIVERSITY OF CALIFORNIA BERKELEY | F31 | 2018 | 0.28 |
| MODELING DNA METHYLATION'S ROLE IN GENE REGULATION | WASHINGTON UNIVERSITY | R01 | 2018 | 0.26 |
| Computational modeling of DNA methylation-mediated gene regulation | WASHINGTON UNIVERSITY | R01 | 2020 | 0.24 |

**Cluster 29:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 | 0.08 |
| Studying how the hippocampal-prefrontal-hypothalamic circuit encodes social dominance | SALK INSTITUTE FOR BIOLOGICAL STUDIES | K99 | 2020 | 0.076 |
| BIGDATA: Small DA Social Behavior Driven Modeling and Optimization of Information | GEORGIA INSTITUTE OF TECHNOLOGY | R01 | 2015 | 0.069 |
| Neural Circuit Mechanisms of Social Homeostasis in Individuals and Supraorganismal Social Groups | SALK INSTITUTE FOR BIOLOGICAL STUDIES | DP1 | 2020 | 0.068 |
| The Molecular Underpinnings of Complex Social Behavior | ROCKEFELLER UNIVERSITY | R35 | 2020 | 0.066 |

**Cluster 30:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| High speed automated intraoperative microscopy of the prostate circumference to ensure tumor-free margins in radical prostatectomy | TULANE UNIVERSITY OF LOUISIANA | R01 | 2020 | 0.16 |
| CLINICAL AND EPIDEMIOLOGICAL CENTER--PROSTATE CANCER | JOHNS HOPKINS UNIVERSITY | U01 | 2004 | 0.16 |
| Real-time prostate lesion tracking during SBRT | UT SOUTHWESTERN MEDICAL CENTER | R01 | 2020 | 0.16 |
| Genetic & epigenetic analysis of angiogenesis genes in recurrent prostate cancer | H. LEE MOFFITT CANCER CTR & RES INST | R01 | 2012 | 0.16 |
| DEVELOPMENT OF ARTIFICIAL INTELLIGENCE (AI) TOOLS TO UNDERSTAND AND DUPLICATE EXPERTS RADIATION THERAPY PLANNING FOR PROSTATE CANCER | ONCOSPACE, INC. | N01 | 2019 | 0.16 |

**Cluster 31:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Measuring Infant Pain Objectively using Sensor Fusion and Machine Learning Algorithms | AUTONOMOUS HEALTHCARE, INC. | R41 | 2018 | 0.42 |
| Autonomous Pain Recognition in Non-Verbal and Critically Ill Patients | UNIVERSITY OF FLORIDA | R21 | 2020 | 0.4 |
| A Multimodal Approach for Monitoring Prolonged Acute Pain in Neonates | UNIVERSITY OF SOUTH FLORIDA | R21 | 2020 | 0.4 |
| Finding Good TEMporal PostOperative pain Signatures (TEMPOS) | UNIVERSITY OF FLORIDA | R01 | 2019 | 0.4 |
| Evaluation of Pain in Chronic Pancreatitis using the NAPS2 cohorts | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R21 | 2015 | 0.39 |

**Cluster 32:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Histopathology correlated quantitative analysis of lung nodules with LDCT for early detection of lung cancer | UNIVERSITY OF MICHIGAN AT ANN ARBOR | U01 | 2020 | 0.24 |
| Macro-vasculature: A Novel Image Biomarker of Lung Cance | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2020 | 0.24 |
| Lung cancer in East Africa and the relationship to HIV-1 infection: epidemiology, molecular characterization and imaging | CASE WESTERN RESERVE UNIVERSITY | U54 | 2020 | 0.23 |
| Lung Screening: Efficacy versus Effectiveness | BROWN UNIVERSITY | R01 | 2020 | 0.23 |
| A diagnostic model for malignant pulmonary nodules | UNIVERSITY OF MARYLAND BALTIMORE | R21 | 2020 | 0.22 |

**Cluster 33:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Nasal biomarkers of asthma | ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI | R01 | 2019 | 0.47 |
| Asthma ascertainment and characterization through electronic health records | MAYO CLINIC ROCHESTER | R01 | 2017 | 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 | 0.42 |
| SCH: kHealth: Semantic Multisensory Mobile Approach to Personalized Asthma Care | WRIGHT STATE UNIVERSITY | R01 | 2018 | 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 |

**Cluster 34:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Avoidable Acute Care Use among Patients with Lupus | BRIGHAM AND WOMEN'S HOSPITAL | K23 | 2020 | 0.13 |
| Understanding Functional Connectivity Abnormalities In Individual Patients with Psychosis | MASSACHUSETTS GENERAL HOSPITAL | K01 | 2020 | 0.12 |
| 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 | 0.1 |
| Multimodal Biomarkers in Frontotemporal Lobar Degeneration | UNIVERSITY OF PENNSYLVANIA | K01 | 2017 | 0.099 |
| The initial care of younger adults with newly diagnosed type 2 diabetes | KAISER FOUNDATION RESEARCH INSTITUTE | K23 | 2020 | 0.096 |

**Cluster 35:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Multi-parametric 4-D Imaging Biomarkers for Neoadjuvant Treatment Response | UNIVERSITY OF PENNSYLVANIA | R01 | 2020 | 0.059 |
| In vivo Macroscopic Fluorescence Lifetime Molecular Optical Imaging | RENSSELAER POLYTECHNIC INSTITUTE | R01 | 2020 | 0.053 |
| Brain Cancer Radio-Pathomics for Predicting Heterogeneous Cytology | MEDICAL COLLEGE OF WISCONSIN | R01 | 2020 | 0.046 |
| Augmented reality visualization for intraoperative guidance based on fluorescence lifetime | UNIVERSITY OF CALIFORNIA AT DAVIS | R03 | 2019 | 0.043 |
| A New Paradigm for Integrated Analysis of Multiscale Genomic Imaging Datasets | TULANE UNIVERSITY OF LOUISIANA | R21 | 2010 | 0.042 |

**Cluster 36:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Sign Finder: Computer Vision to Find and Read Signs | BLINDSIGHT CORPORATION | R44 | 2006 | 0.094 |
| SIGN FINDER: COMPUTER VISION TO FIND AND READ SIGNS | BLINDSIGHT CORPORATION | R43 | 2000 | 0.082 |
| Locating and Reading Informational Signs | UNIVERSITY OF CALIFORNIA LOS ANGELES | R01 | 2004 | 0.081 |
| Providing Access to Appliance Displays for Visually Impaired Users | SMITH-KETTLEWELL EYE RESEARCH INSTITUTE | R01 | 2015 | 0.071 |
| Enabling Audio-Haptic Interaction with Physical Objects for the Visually Impaired | SMITH-KETTLEWELL EYE RESEARCH INSTITUTE | R01 | 2019 | 0.064 |

**Cluster 37:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Quantitative Modeling of Transcription Factor-DNA Binding | UNIVERSITY OF SOUTHERN CALIFORNIA | R35 | 2020 | 0.23 |
| Defining the multi-dimensional code of zinc finger specificity-Resubmission-1 | NEW YORK UNIVERSITY SCHOOL OF MEDICINE | R01 | 2020 | 0.2 |
| Computational models for the signaling of tumor necrosis factor receptor on cell surfaces | ALBERT EINSTEIN COLLEGE OF MEDICINE | R01 | 2020 | 0.19 |
| Metal binding sites in macromolecular structures | UNIVERSITY OF VIRGINIA | R01 | 2019 | 0.18 |
| Knowledge-based Analysis of Transcription Factor Binding | WHITEHEAD INSTITUTE FOR BIOMEDICAL RES | F32 | 2005 | 0.16 |

**Cluster 38:**

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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 | 0.047 |
| Detecting deviations in clinical care in ICU data streams | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2011 | 0.037 |
| Data Driven Methods for Missing Data Imputation in Surgical Disparities Research | GEORGE WASHINGTON UNIVERSITY | R01 | 2020 | 0.035 |
| Collaborative Research: Statistical algorithms for anomaly detection and patterns recognition in patient care and safety event reports | VIRGINIA POLYTECHNIC INST AND ST UNIV | R01 | 2019 | 0.035 |
| Collaborative Research: Statistical algorithms for anomaly detection and patterns recognition in patient care and safety event reports | NORTH CAROLINA STATE UNIVERSITY RALEIGH | R01 | 2020 | 0.035 |

**Cluster 39:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Multi-modal and Extreme PET/MRI Reconstruction Methods | UNIVERSITY OF CALIFORNIA, SAN FRANCISCO | F32 | 2020 | 0.13 |
| Quantitative Low-Dose PET Imaging | YALE UNIVERSITY | R01 | 2020 | 0.099 |
| Data-driven Head Motion Correction in PET Imaging Using Deep Learning | YALE UNIVERSITY | R21 | 2020 | 0.099 |
| Real-Time MRI Motion Correction System | STANFORD UNIVERSITY | R01 | 2013 | 0.095 |
| Rapid motion-robust quantitative DCE-MRI for the assessment of gynecologic cancers | SLOAN-KETTERING INST CAN RESEARCH | R01 | 2020 | 0.092 |

**Cluster 40:**

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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 | 0.053 |
| Computerized population Programs for Three Cancer Risks | UNIVERSITY OF RHODE ISLAND | R01 | 2005 | 0.051 |
| Improving the Accuracy of ASCVD Risk Estimation Using Population-Level EHR and Genetic Data | BROWN UNIVERSITY | F30 | 2020 | 0.049 |
| Dynamic Multichain Graphical Models for the Analysis of Childhood Obesity Data | WAKE FOREST UNIVERSITY HEALTH SCIENCES | U01 | 2013 | 0.047 |
| Prediction of short-term risk of coronary heart disease and overall risk of ischemic cardiomyopathy | STANFORD UNIVERSITY | F32 | 2018 | 0.046 |

**Cluster 41:**

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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 | 0.33 |
| 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 | 0.31 |
| 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 42:**

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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 | 0.16 |
| Eliminating Tobacco-Related Disparities amount African American Smokers | UNIVERSITY OF UTAH | R01 | 2020 | 0.15 |
| Eliminating Tobacco-Related Disparities among African American Smokers | RICE UNIVERSITY | R01 | 2016 | 0.15 |
| An Olfactory Method for Controlling Cigarette Craving | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2017 | 0.15 |
| An Olfactory Method for Controlling Cigarette Craving - Supplement | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2015 | 0.15 |

**Cluster 43:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Towards cortical visual prosthetics | BOSTON CHILDREN'S HOSPITAL | R21 | 2010 | 0.18 |
| 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 | 0.16 |
| Representation of information across the human visual cortex | UNIVERSITY OF CALIFORNIA BERKELEY | R01 | 2018 | 0.16 |
| A Visual Assessment System for Retinal Function/Drug Discovery | AFASCI, INC. | R41 | 2015 | 0.15 |

**Cluster 44:**

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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 | 0.28 |
| 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 |
| High content in vivo screening for acute kidney injury ameliorating drugs | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2019 | 0.23 |
| 2019 STONE LAB SCIENTIFIC SYMPOSIUM: THINKING OUTSIDE THE BOX FOR KIDNEY STONE DISEASE | AMERICAN UROLOGICAL ASSOCIATION | U13 | 2019 | 0.22 |

**Cluster 45:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Cross-frequency coupling: its role in brain function and dysfunction | GEORGETOWN UNIVERSITY | RF1 | 2020 | 0.057 |
| CRCNS: Information Flow in the Brain During Language and Meaning Comprehension | CARNEGIE-MELLON UNIVERSITY | R01 | 2016 | 0.056 |
| A BRAIN Initiative Resource: The Neuroscience Multi-omic Data Archive | UNIVERSITY OF MARYLAND BALTIMORE | R24 | 2020 | 0.056 |
| Real-Time Automated Detection of Craving States with fMRI and EEG | UNIVERSITY OF CALIFORNIA LOS ANGELES | R33 | 2012 | 0.052 |
| Large-scale Network Modeling for Brain Dynamics: Statistical Learning and Optimization | BROWN UNIVERSITY | R01 | 2017 | 0.052 |

**Cluster 46:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Digital Mammography: Advanced Computer-Aided Breast Can\* | UNIVERSITY OF MICHIGAN | R01 | 2007 | 0.24 |
| Computer-Aided Detection of Urinary Tract Cancer on MDCT Urography | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2014 | 0.23 |
| Improving Breast Cancer Detection and Diagnosis with CAD | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | R01 | 2011 | 0.21 |
| DEVELOPMENT OF COMPUTER BASED TECHNIQUES IN MAMMOGRAPHY | UNIVERSITY OF MICHIGAN | R01 | 2000 | 0.2 |
| Computer-aided Detection of Pulmonary Embolism on CT Pulmonary Angiography | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R01 | 2012 | 0.19 |

**Cluster 47:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| High-throughput high-content single cell analysis by multichannel stimulatedRaman flow cytometry | BOSTON UNIVERSITY (CHARLES RIVER CAMPUS) | R01 | 2019 | 0.12 |
| The Statistical and Computational Analysis of Flow Cytometry Data | FRED HUTCHINSON CANCER RESEARCH CENTER | R01 | 2011 | 0.1 |
| Transformative Computational Infrastructures for Cell-Based Biomarker Diagnostics | J. CRAIG VENTER INSTITUTE, INC. | U01 | 2020 | 0.086 |
| Accelerating Multi-modal Biomarker Discovery in Translational Research with Cloud Data Integration | CYTOBANK, INC. | R44 | 2019 | 0.085 |
| A knowledge graph framework for automated gating analysis of cytometry data | GEORGIA INSTITUTE OF TECHNOLOGY | UH2 | 2020 | 0.08 |

**Cluster 48:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Predicting Self-Harm, Suicide Attempt, and Suicidal Death using Longitudinal EHR, Claims and Mortality Data | WEILL MEDICAL COLL OF CORNELL UNIV | R01 | 2020 | 0.42 |
| Improving Suicide Prediction using NLP-Extracted Social Determinants of Health | UNIVERSITY OF MASSACHUSETTS LOWELL | R01 | 2020 | 0.4 |
| Digital Monitoring of Agitation for Short-Term Suicide Risk Prediction | MASSACHUSETTS GENERAL HOSPITAL | K23 | 2020 | 0.39 |
| Innovations in Suicide Prevention Research (INSPIRE) | UNIV OF NORTH CAROLINA CHAPEL HILL | R01 | 2020 | 0.39 |
| Treatment Utilization Before Suicide (TUBS) | HENRY FORD HEALTH SYSTEM | R01 | 2018 | 0.39 |

**Cluster 49:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Deciphering the System-Wide Immune Response to Head and Neck Cancer | UNIVERSITY OF CALIFORNIA, SAN FRANCISCO | K23 | 2020 | 0.13 |
| Harnessing protease activity for predictive monitoring of cancer immunotherapy | GEORGIA INSTITUTE OF TECHNOLOGY | R01 | 2020 | 0.11 |
| Comprehensive analysis of human adaptive immune receptors to elucidate correlates of Epstein-Barr virus disease suppression | UNIVERSITY OF KANSAS LAWRENCE | DP5 | 2020 | 0.1 |
| The CSBC Research Center for Cancer Systems Immunology at MSKCC | SLOAN-KETTERING INST CAN RESEARCH | U54 | 2020 | 0.084 |
| Genotype and phenotype predictors in therapy response in renal cell carcinoma | UNIVERSITY OF PENNSYLVANIA | R01 | 2013 | 0.084 |

**Cluster 50:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| SPEEKO for Elderspeak: A Self-Monitoring App to Improve Communication and Reduce Behavioral Symptoms in Care for Persons with Alzheimer's Disease and Other Dementias | UNIVERSITY OF KANSAS MEDICAL CENTER | R21 | 2020 | 0.14 |
| Changing Talk Online (CHATO): A Pragmatic Trial to Reduce Behavioral Symptoms in Dementia Care | UNIVERSITY OF KANSAS MEDICAL CENTER | R61 | 2019 | 0.14 |
| Planning Changing Talk Online (CHATO): a Clinical Trial Testing the Effects of Online Communication Training for Nursing Home Staff on Behavioral and Psychological Symptoms of Residents with Dementia | UNIVERSITY OF KANSAS MEDICAL CENTER | R34 | 2018 | 0.14 |
| CATcare: Cognitive Assistive Technology for Dementia Homecare | OKLAHOMA STATE UNIVERSITY STILLWATER | R15 | 2019 | 0.11 |
| 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 | 0.11 |

**Cluster 51:**

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| --- | --- | --- | --- | --- |
| 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 | 0.16 |
| Evidence-based Diagnostic Tools for Translational and Clinical Research (eTfor2) | VANDERBILT UNIVERSITY | R01 | 2012 | 0.15 |
| Informatics Tools for Pharmacogenomic Discovery using Practice-based Data | VANDERBILT UNIVERSITY MEDICAL CENTER | R01 | 2017 | 0.15 |
| Vanderbilt Genome-Electronic Records Project | VANDERBILT UNIVERSITY | U01 | 2011 | 0.14 |
| Genetic Discovery and Application in a Clinical Setting Continuing a Partnership | KAISER FOUNDATION HEALTH PLAN OF WASHINGTON | U01 | 2014 | 0.14 |

**Cluster 52:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Multi-Site Validation Study of the HLHS Arrest Predictor | BAYLOR COLLEGE OF MEDICINE | R01 | 2020 | 0.11 |
| Development of clinical decision tools for management of diarrhea of children in high and low resource settings | UNIVERSITY OF UTAH | R01 | 2020 | 0.099 |
| PREDICTING OUTCOME IN CHILDREN WITH NEW-ONSET TICS USING NEUROIMAGING DATA | WASHINGTON UNIVERSITY | R21 | 2016 | 0.095 |
| The development of fluent and automatic reading | UNIVERSITY OF GEORGIA (UGA) | R01 | 2005 | 0.094 |
| THE DEVELOPMENT OF FLUENT AND AUTOMATIC READING | UNIVERSITY OF GEORGIA (UGA) | R01 | 2000 | 0.094 |

**Cluster 53:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Comprehensive functional characterization and dissection of noncoding regulatory elements and human genetic variation | BROAD INSTITUTE, INC. | UM1 | 2020 | 0.15 |
| Decoding the regulatory architecture of the human genome across cell types, individuals and disease | STANFORD UNIVERSITY | U01 | 2020 | 0.14 |
| Computational methods for modeling lineage-specific gene regulation | STANFORD UNIVERSITY | R01 | 2016 | 0.13 |
| Development of a Neuronal Regulatory Lexicon | JOHNS HOPKINS UNIVERSITY | R01 | 2018 | 0.13 |
| Global Discovery and Validation of Functional Regulatory Elements | UNIVERSITY OF MICHIGAN AT ANN ARBOR | R00 | 2017 | 0.12 |

**Cluster 54:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Mid-frontal delta/theta rhythms and cognitive control in PD | UNIVERSITY OF IOWA | R01 | 2020 | 0.34 |
| Intrinsic Cortical Networks and Cognitive Dysfunction in Parkinson's Disease | UNIVERSITY OF COLORADO DENVER | K02 | 2017 | 0.32 |
| Intrinsic Cortical Networks and Cognitive Dysfunction in Parkinson???s Disease | UNIVERSITY OF COLORADO DENVER | K02 | 2014 | 0.32 |
| Characterizing Intrinsic Functional Cortical Networks in Parkinson Disease Dementia | UNIVERSITY OF COLORADO DENVER | R21 | 2017 | 0.29 |
| The Gut Microbiome in Parkinson Disease | UNIVERSITY OF MASSACHUSETTS LOWELL | R01 | 2019 | 0.29 |

**Cluster 55:**

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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 | 0.16 |
| Crowd coding in the brain:3D imaging and control of collective neuronal dynamics | UNIV OF MARYLAND, COLLEGE PARK | U01 | 2016 | 0.13 |
| Corticofugal Modulation of Tactile Sensory Processing | DUKE UNIVERSITY | R01 | 2005 | 0.13 |
| "Methods from Computational Topology and Geometry for Analysing Neuronal Tree and Graph Data" | COLD SPRING HARBOR LABORATORY | R01 | 2018 | 0.12 |
| CRCNS: Theory and Experiments to Elucidate Neural Coding in the Reward Circuit | UNIVERSITY OF WASHINGTON | R01 | 2020 | 0.11 |

**Cluster 56:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Novel Approaches for Predicting Unstructured Short Periods of Physical Activities in Youth | UNIVERSITY OF TENNESSEE KNOXVILLE | R01 | 2019 | 0.18 |
| An Intelligent Physical Activity Monitor | CREARE, INC. | R43 | 2006 | 0.18 |
| Advancing Physical Activity Measurement Using Pattern Recognition Techniques | UNIVERSITY OF MASSACHUSETTS AMHERST | RC1 | 2010 | 0.17 |
| A cutting edge approach to assessing physical activities occurring on sidewalks/streets | UNIVERSITY OF DELAWARE | R21 | 2019 | 0.16 |
| Developing Objective Assessment of Physical Activity and Sedentary Behavior for Adults with Down Syndrome | MISSISSIPPI STATE UNIVERSITY | R15 | 2019 | 0.14 |

**Cluster 57:**

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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 | 0.1 |
| Cell line identification with DNA replication timing fingerprints | INSILICOM, LLC | R43 | 2019 | 0.098 |
| Understanding the control mechanisms of 3D cell migration from new dimensions | OREGON STATE UNIVERSITY | R35 | 2020 | 0.097 |
| Symmetry breaking and polarization of cell in 3D environments | UT SOUTHWESTERN MEDICAL CENTER | F32 | 2017 | 0.095 |
| Deciphering the building blocks of hippocampal circuits | BAYLOR COLLEGE OF MEDICINE | R01 | 2020 | 0.094 |

**Cluster 58:**

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| --- | --- | --- | --- | --- |
| 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 | 0.23 |
| Improving Diagnosis of Multiple Sclerosis Through the Integration of Novel Imaging and Laboratory Biomarkers | UNIVERSITY OF VERMONT & ST AGRIC COLLEGE | K02 | 2020 | 0.22 |
| Analysis of LC-MS data to identify peptide and glycan biomarkers for hepatocellul | GEORGETOWN UNIVERSITY | R01 | 2014 | 0.21 |
| Sequential Ion/Ion Reactions for Large Peptide and Whole Protein Characterization | UNIVERSITY OF WISCONSIN-MADISON | R01 | 2015 | 0.2 |
| Intelligent Aids for Proteomic Data Mining | UNIVERSITY OF PITTSBURGH AT PITTSBURGH | K25 | 2008 | 0.2 |

**Cluster 59:**

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| --- | --- | --- | --- | --- |
| Title | Awardee | Award Activity | Year | Sample Silhouette Score |
| Programmable RNA-targeting CRISPR-Cas tools to study RNA biology | UNIVERSITY OF ROCHESTER | R35 | 2020 | 0.31 |
| The next generation of RNA-Seq simulators for benchmarking analyses | UNIVERSITY OF PENNSYLVANIA | R21 | 2019 | 0.27 |
| New methods for computational modeling of RNA structures | UNIVERSITY OF MISSOURI-COLUMBIA | R35 | 2020 | 0.26 |
| Computational genome-wide RNA profiling using next-generation sequencing | UNIVERSITY OF PENNSYLVANIA | R01 | 2016 | 0.24 |
| Discovery of Novel RNA Genes in Genomic DNA Sequences | UNIVERSITY OF CALIF-LAWRENC BERKELEY LAB | R01 | 2005 | 0.24 |