Supplementary Online Content

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eTable. Description of Studies Reviewed

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable. Description of Studies Reviewed

No.	DOI	Title	Journal	Clinical Application	n	Shared Data Set	Within- or Between-Subject Prediction	Predictor	Predictor details	Predictand	ML Technique	Multivariate or univariate?	Classification or regression?	CV	Permuation?	Holdout?	Metric
1	https://doi.org/10.1155/2018/6142898	Mutual Information Better Quantifies Brain Network Architecture in Children with Epilepsy	Computational and Mathematical Methods in Medicine	No	24		Between	rsfMRI	Network metrics	IQ	Random forest	Multivariate	Regression	Other	No	No	Explained variance
2	https://doi.org/10.3389/fpsyt.2018.00532	Pre-treatment Resting-State Functional MR Imaging Predicts the Long-Term Clinical Outcome After Short-Term Paroxtine Treatment in Post-traumatic Stress Disorder	Frontiers in Psychiatry	Yes	20		Between	rsfMRI	Network metrics; ALFF	Response to paroxetine (long-term)	SVM	Multivariate	Classification	LOO	Yes	No	Classification accuracy
3	https://doi.org/10.1016/j.jad.2017.12.041	Memory performance predicts response to psychotherapy for depression inbipolar disorder: A pilot randomized controlled trial with exploratoryfunctional magnetic resonance imaging	Journal of Affective Disorders	Yes	17		Between	Task fMRI	Verbal memory task	Response to CBT and SP	Linear regression	Univariate	Regression	None			Regression significance
4	https://doi.org/10.1186/s13063-018-2995-7	Effects of recombinant human erythropoietin on cognition and neural activity in remitted patients with mood disorders and	Trials	Yes	52		Between	Task fMRI	Picture encoding, working memory, and verbal tasks	Response to erythropoetin	Regression	Univariate	Regression	None			Regression significance

		first-degree relatives of patients with psychiatric disorders- a study protocol for a randomized controlled trial															
5	https://doi.org/10.1016/j.neuroimage.2018.10.074	Connectome-based models predict attentional control in aging adults	NeuroImage	Yes	34		Between	Task fMRI	Stroop task	Reaction time in Stroop task	GLM	Univariate and multivariate (2 variables)	Regression	None		This study itself can be considered a holdout, as the model was predetermined	Explained variance
6	https://doi.org/10.1016/j.neuroscience.2018.10.036	Resting-state Functional Connectivity and Deception: Exploring Individualized Deceptive Propensity by Machine Learning	Neuroscience	No	47		Between	rsfMRI	Network metrics	Deception degree in ultimatum game	Relevance vector regression	Multivariate	Regression	LOO, k-fold	Yes	Yes	Pearson correlation, MAE
7	https://doi.org/10.1016/j.neuroimage.2018.10.062	Intersubject similarity of personality is associated with intersubject similarity of brain connectivity patterns	NeuroImage	No	984	HCP	Between	rsfMRI	FC	Single-item ratings on FFM personality test	LASSO logistic regression	Multivariate	Classification	K-fold	Yes	Yes	Classification accuracy
8	https://doi.org/10.1016/j.neuroimage.2018.10.054	Deep neural network predicts emotional responses of the human brain from functional magnetic resonance imaging	NeuroImage	No	10		Within	Task fMRI	Auditory task	Emotion rating	DNN	Multivariate	Regression and classification	K-fold	Yes	No	Pearson correlation, classification accuracy
9	https://doi.org/10.3389/fnhum.2018.00405	Whole-Brain Network Connectivity Underlying the Human Speech Articulation as Emerged Integrating Direct Electric	Frontiers in Human Neuroscience	No	7		Between	rsFMRI		Speech articulation network location	Other		Regression	None			Correlation

		Stimulation, Resting State fMRI and Tractography															
10	https://doi.org/10.1002/hbm.24432	I lie, why don't you: Neural mechanisms of individual differences in self-serving lying	Human Brain Mapping	No	37		Between	Task fMRI	Color-reporting task	Degree of dishonesty	Kernel ridge regression	Multivariate	Regression	LOO	Yes	No	Pearson correlation, coefficient of determination, MSE
11	https://doi.org/10.1002/jmri.26214	Disrupted Functional Connectivity and Activity in the White Matter of the Sensorimotor System in Patients With Pontine Strokes	Journal of Magnetic Resonance Imaging	Yes	16		Between	fFA	FA was measured in functionally mapped white matter tracts (hence "functional" FA)	Motor function (Fugl-Meyer score)	Partial least squares regression	Multivariate	Regression	LOO	No	No	Pearson correlation
12	https://doi.org/10.1016/j.nicl.2018.10.011	Using fMRI and machine learning to predict symptom improvement following cognitive behavioural therapy for psychosis	NeuroImage: Clinical	Yes	22		Between	Task fMRI	Facial affect task	Response to CBTp: psychotic and affective symptom improvement	Kernel ridge regression	Multivariate	Regression	K-fold	Yes	No	Pearson, MSE
13	https://doi.org/10.1038/s41598-018-33621-6	Common Functional Brain States Encode both Perceived Emotion and the Psychophysiological Response to Affective Stimuli	Scientific Reports	No	19		Within	Task fMRI	Image viewing task	Reported valence and arousal; skin conductance	SVM	Multivariate	Regression	LOO	Yes	No	Pearson correlation
14	https://doi.org/10.1017/S0033291718002866	Machine learning multivariate pattern analysis predicts classification of posttraumatic stress disorder and its	Psychological Medicine	Yes	181		Between	rsfMRI	ALFF, FC	PTSD diagnosis	Multi-class Gaussian process classification	Multivariate	Classification	LOO	Yes	No	Classification accuracy

		dissociative subtype: a multimodal neuroimaging approach															
15	https://doi.org/10.1038/s41467-018-06350-7	Cerebello-thalamo-cortical hyperconnectivity as a state-independent functional neural signature for psychosis prediction and characterization	Nature Communications	Yes	302	NAPLS	Between	Task fMRI	Memory and emotion task battery	Time of conversion to psychosis	Regression	Univariate	Regression	None			Spearman correlation
16	https://doi.org/10.1017/pen.2018.8	Resting-state functional brain connectivity best predicts the personality dimension of openness to experience	Personal Neuroscience	No	884	HCP	Between	rsfMRI	FC	Big 5 traits	Elastic net regression	Multivariate and univariate	Regression	LXO	Yes	No	Pearson correlation, RMSD
17	https://doi.org/10.3389/fnins.2018.00569	Influence of Individual Differences in fMRI-Based Pain Prediction Models on Between-Individual Prediction Performance..p	Frontiers in Neuroscience	Yes	30		Between and within	Task fMRI	Pain response task	Pain rating	Partial least squares regression	Multivariate	Regression	Other	No	No	MAE, MPB
18	https://doi.org/10.1007/s11682-018-9949-2	Overall survival time prediction for high-grade glioma patients based on large-scale brain functional networks	Brain Imaging and Behavior	Yes	68		Between	rsfMRI	Network metrics	Survival time (2 classes: short and long)	SVM	Multivariate	Classification	LOO	No	No	Classification accuracy
19	https://doi.org/10.1371/journal.pone.0202504	Stronger prediction of motor recovery and outcome post-stroke by cortico-spinal tract integrity than functional connectivity	PLOS One	Yes	31		Between	rsfMRI, FA	FC, FA	Motor performance	Regression	Multivariate	Regression	None			Explained variance

20	https://doi.org/10.1016/j.nicl.2018.08.016	Exploring the prediction of emotional valence and pharmacologic effect across fMRI studies of antidepressants	NeuroImage: Clinical	Yes	306	From previous literature	Between	Task fMRI	Facial affect task	Drug vs. placebo; positive vs. negative valence trial	Gradient boosting machine	Multivariate	Classification	LXO	No	Yes	Classification accuracy
21	https://doi.org/10.1016/j.neuroimage.2018.08.038	Connectome-based individualized prediction of temperament trait scores	NeuroImage	No	360	UESTC, HCP	Between	rsfMRI	FC	Temperament scores; neuroticism and extraversion in HCP	LASSO regression	Multivariate	Regression	K-fold	Yes	Yes	Pearson correlation, RMSE
22	https://doi.org/10.1098/rstb.2017.0284	A distributed brain network predicts general intelligence from resting-state human neuroimaging data	Philosophical Transactions B	No	1181	HCP	Between	rsfMRI	FC	g	Elastic net regression	Multivariate	Regression	LXO	Yes	No	Pearson correlation, explained variance, nRMSD
23	https://doi.org/10.1016/j.neuropsychologia.2018.08.003	Towards response success prediction: An integrative approach using high- T resolution fMRI and autonomic indices		No	33		Between, pooled	Task fMRI	Response inhibition task	Response inhibition performance	Regression	Univariate	Regression	None			Spearman correlation
24	PMID: 30079274	Parameter-Free Centralized Multi-Task Learning for Characterizing Developmental Sex Differences in Resting State Functional Connectivity	The Thirty-Second AAAI Conference on Artificial Intelligence (AAAI-18)	No	1041	PNC	Between	rsfMRI	FC	Age	Lasso regression	Multivariate	Regression	K-fold	No	No	Correlation
25	https://doi.org/10.1109/ISBI.2018.8363532	Brain age prediction based on resting-state functional connectivity patterns using convolutional neural networks	Proc IEEE Int Symp Biomed Imaging	Yes	983	PNC	Between	rsfMRI	Voxel-wise FC	Brain age	CNN	Multivariate	Regression	K-fold	No	No	Pearson correlation, MAE

26	https://doi.org/10.1073/pnas.1712811115	Neural detection of socially valued community members	PNAS	No	49		Between, pooled	Task fMRI	Face viewing task	Social value of viewed individual	LASSO regression, linear regression	Multivariate and univariate	Classification	LOO	Yes	No	Correlation, classification accuracy
27	https://doi.org/10.1038/s41467-018-04920-3	Task-induced brain state manipulation improves prediction of individual traits	Nature Communications	No	515	HCP, PNC	Between	Task fMRI, rsfMRI	FC	Fluid intelligence	Linear regression	Univariate	Regression	LOO	Yes	Yes	Explained variance
28	https://doi.org/10.1016/j.nicl.2018.06.006	Acute trajectories of neural activation predict remission to pharmacotherapy T in late-life depression	NeuroImage: Clinical	Yes	49		Between	Task fMRI	Emotional regulation and emotional receptivity tasks	Remission of LLD	Least angle regression	Multivariate	Classification	K-fold	Yes	No	Classification accuracy
29	https://doi.org/10.1007/s11682-018-9926-9	Evaluation of machine learning algorithms performance for the prediction of early multiple sclerosis from resting-state FMRI connectivity data	Brain Imaging and Behavior	Yes	37		Between	rsfMRI		MS diagnosis	Various	Multivariate	Classification	K-fold	No	No	Classification accuracy
30	https://doi.org/10.1109/TCBB.2017.2776910	Early Diagnosis of Alzheimer,Âôs Disease Based on Resting-State Brain Networks and Deep Learning	IEEE/ACM TRANSACTIONS ON COMPUTATIONAL BIOLOGY AND BIOINFORMATICS	Yes	170	ADNI	Between	rsfMRI	FC	Mild cognitive impairment	DNN	Multivariate	Classification	K-fold	Yes	No	Classification accuracy
31	https://doi.org/10.1002/hbm.24281	Language network measures at rest indicate individual differences in naming decline after anterior temporal lobe resection	Human Brain Mapping	Yes	39		Between	Task fMRI, rsfMRI	Matrix similarity approach (comparison of resting-state fMRI to "normal" control), network metrics	Naming impairment	Linear regression	Multivariate and univariate	Regression	None			Explained variance

32	https://doi.org/10.1093/cercor/bhy123	Spatial Topography of Individual-Specific Cortical Networks Predicts Human Cognition, Personality, and Emotion	Cerebral Cortex	No	881	HCP	Between	rsfMRI	FC	HCP cognitive measures	Kernel ridge regression	Multivariate	Regression	K-fold	No	No	Correlation
33	https://doi.org/10.1016/j.nicl.2018.01.032	Early prediction of cognitive deficits in very preterm infants using functional T connectome data in an artificial neural network framework	NeuroImage: Clinical	Yes	28		Between	rsfMRI	FC	Cognitive outcome for preterm infants, 2 years later	SVM	Multivariate	Classification	K-fold	No	No	Classification accuracy
34	https://doi.org/10.1016/j.neuroimage.2018.06.001	The effect of machine learning regression algorithms and sample size on individualized behavioral prediction with functional connectivity features	NeuroImage	No	700	HCP	Between	rsfMRI	FC, network metrics	Cognitive scores from HCP	OLS, LASSO, ridge, elastic net, LSVR, RVR	Multivariate	Regression	K-fold	No	No	Pearson correlation, MAE
35	https://doi.org/10.1007/s11682-018-9851-y	Early functional MRI activation predicts motor outcome after ischemic stroke: a longitudinal, multimodal study	Brain Imaging and Behavior	Yes	34		Between	rsfMRI, FA		Motor performance	Linear regression	Multivariate	Regression	None			Explained variance
36	https://doi.org/10.1002/hbm.24202	Spatio-temporal dynamics of resting-state brain networks improve single-subject prediction of schizophrenia diagnosis	Human Brain Mapping	Yes	82		Between	rsfMRI	FC with spatial and temporal variation	Schizophrenia diagnosis	SVM	Multivariate	Classification	K-fold			Classification accuracy

37	https://doi.org/10.1002/hbm.24205	Individualized prediction of trait narcissism from whole-brain resting-state functional connectivity	Human Brain Mapping	No	155	From previous literature	Between	rsfMRI	FC	Trait narcissism	Linear regression	Multivariate	Regression	LOO	Yes	No	Pearson correlation, MSE
38	https://doi.org/10.1002/hbm.24190	Distinguishable brain networks relate disease susceptibility to symptom expression in schizophrenia	Human Brain Mapping	Yes	442	From previous literature	Between	rsfMRI	FC	Schizophrenia diagnosis and symptom scores	Linear regression	Univariate	Regression and classification	LOO	Yes	No	Classification accuracy, explained variance
39	https://doi.org/10.1371/journal.pone.0194856	A general prediction model for the detection of ADHD and Autism using structural and functional MRI	PLOS One	Yes	558	ADHD-200, ABIDE	Between	rsfMRI		ADHD/autism diagnosis	SVM	Multivariate	Classification	K-fold	Yes	Yes	Classification accuracy
40	https://doi.org/10.1073/pnas.1802176115	Neural precursors of future liking and affective reciprocity	PNAS	No	16		Between	Task fMRI	Face viewing task	Future liking of another person	Other	Multivariate	Regression	None			Path coefficients
41	https://doi.org/10.1016/j.neulet.2018.04.007	Random forest based classification of alcohol dependence patients and healthy controls using resting state MRI	Neuroscience Letters	Yes	92		Between	rsfMRI	FC	AUD diagnosis	Random forest	Multivariate	Classification	LOO	No	No	Classification accuracy
42	https://doi.org/10.1016/j.ebiom.2018.03.017	Multi-Site Diagnostic Classification of Schizophrenia Using Discriminant Deep Learning with Functional Connectivity MRI	EBioMedicine	Yes	784		Between	rsfMRI	FC	Schizophrenia diagnosis	SVM	Multivariate	Classification	K-fold	No	No	Classification accuracy
43	https://doi.org/10.3389/fpsyt.2018.00092	Fronto-Temporal connectivity Predicts ecT Outcome in	Frontiers in Psychiatry	Yes	46		Between	rsfMRI	Network metrics	ECT outcome	SVM	Multivariate	Classification	K-fold	No	No	Classification accuracy

		Major Depression															
44	https://doi.org/10.1016/j.neuropsychologia.2018.03.023	Identification of task sets within and across stimulus modalities	Neuropsychologia	No	20	From previous literature	Within	Task fMRI	FC	Stimulus (visual vs. auditory)/task (affective vs. semantic identification)	SVM	Multivariate	Classification	LOO	Yes	No	Classification accuracy
45	https://doi.org/10.1016/j.neuroimage.2018.03.012	Template-based prediction of vigilance fluctuations in resting-state fMRI	NeuroImage	No	10	From previous literature	Between	rsfMRI		Vigilance (from EEG)	Other	Multivariate	Regression	LOO	No	No	Correlation
46	http://doi.org/10.1016/j.bpsc.2017.07.003	Machine Learning of Functional Magnetic Resonance Imaging Network Connectivity Predicts Substance Abuse Treatment Completion	Biological Psychiatry: Cognitive Neuroscience and Neuroimaging	Yes	139		Between	Task fMRI	Go/NoGo task	Substance abuse treatment completion	SVM	Multivariate	Classification	K-fold	Yes	No	Classification accuracy
47	http://doi.org/10.1016/j.nicl.2017.10.027	Removal of artifacts from resting-state fMRI data in stroke	NeuroImage: Clinical	Yes	74		Between	rsfMRI	FC	Western aphasia battery score	SVM, linear regression	Multivariate and univariate	Regression	LOO	No	No	Pearson correlation
48	https://doi.org/10.1016/j.nicl.2018.02.002	Disruption to functional networks in neonates with perinatal brain injury T predicts motor skills at 8 months	NeuroImage: Clinical	Yes	53		Between	Task fMRI	Disrupted FC measure	Motor skills at 8 months	Regression	Univariate	Regression	None			Pearson correlation
49	https://doi.org/10.1007/s11682-018-9845-9	Variance of the global signal as a pretreatment predictor of antidepressant treatment response in drug-naiÃ¤ve major	Brain Imaging and Behavior	Yes	47		Between	rsfMRI	Variance of the global signal	Antidepressant treatment response	Regression	Univariate	Regression	None			Pearson correlation

		depressive disorder															
50	https://doi.org/10.1016/j.neuroimage.2018.02.025	Dynamic fMRI networks predict success in a behavioral Weight Gain/Loss program among older adults	NeuroImage	Yes	52		Between	Task fMRI, rsfMRI	Dynamic FC	Behavioral weight-loss treatment response	SVM	Multivariate	Classification	Other	Yes	No	Classification accuracy
51	https://doi.org/10.1016/j.cortex.2018.01.009	Prefrontal mediation of the reading network predicts intervention response in dyslexia	Cortex	Yes	37		Between	Task fMRI	Word viewing task	Dyslexia intervention response	Other	Multivariate	Regression	None			Correlation
52	https://doi.org/10.1016/j.clinph.2017.12.031	Predicting postoperative language outcome using presurgical fMRI, MEG, TMS, and high gamma ECoG	Clinical Neurophysiology	Yes	11		Between	Task fMRI, MEG, hgECog	Language task, used volume of area with language-related activation as input	Decline in language ability	SVM	Multivariate	Classification	K-fold	No	No	Classification accuracy
53	https://doi.org/10.3389/fnins.2017.00744	Music Intervention Leads to Increased Insular Connectivity and Improved Clinical Symptoms in Schizophrenia	Frontiers in Neuroscience	Yes	39		Between	rsfMRI	Voxel-wise FC from vAI, dAI, and PI	Change in schizophrenia symptoms	SVM	Multivariate	Classification	LOO	No	No	Classification accuracy
54	https://doi.org/10.1016/j.wneu.2018.01.063	Pretherapeutic Functional Imaging Allows Prediction of Head Tremor Arrest After Thalamotomy for Essential Tremor: The Role of Altered Interconnectivity Between Thalamolimbic and Supplementary Motor Circuits	World Neurosurgery	Yes	11		Between	rsfMRI	Network interconnectivity	Tremor improvement 1 year post-surgery	Regression	Univariate	Regression	None			Regression p-value

55	https://doi.org/10.1002/hbm.23953	Prediction of activation patterns preceding hallucinations in patients with schizophrenia using machine learning with structured sparsity	Human Brain Mapping	Yes	36		Between, pooled	rsfMRI	t-statistic of voxel-by-voxel regression with pre-hallucination time point	Presence of hallucination/transition to hallucination	Elastic net regression	Multivariate	Classification	LOO	No	No	Classification accuracy
56	https://doi.org/10.1073/pnas.1713532115	Robust prediction of individual creative ability from brain functional connectivity	PNAS	No	163		Between	Task fMRI	Network strength in "high-creativity" or "low-creativity" networks	Creativity score on task	Linear regression	Univariate	Regression	LOO	Yes	Yes	Pearson correlation
57	https://doi.org/10.1002/hbm.23956	Motor imagery training: Kinesthetic imagery strategy and inferior parietal fMRI activation	Human Brain Mapping	No	48		Between	Task fMRI	Motor imagery task	Performance after motor imagery training	Regression	Univariate	Regression	None			Regression p-value
58	https://doi.org/10.7554/eLife.30150.001	Associability-modulated loss learning is increased in posttraumatic stress disorder	eLife	Yes	68		Between, pooled	Task fMRI, PTSD severity	Two-arm bandit task	Switching behavior during two-armed bandit test	Logistic regression	Multivariate	Classification	None			Chi-square model improvement
59	https://doi.org/10.1186/s12868-017-0395-7	Stereoscopic processing of crossed and uncrossed disparities in the human visual cortex	BMC Neuroscience	No	27		Within	Task fMRI	Binocular disparity task	Positive/negative/no disparity	SVM	Multivariate	Classification	K-fold	Yes	No	Classification accuracy
60	https://doi.org/10.3389/fpsyg.2018.01754	Longitudinal Task-Related Functional Connectivity Changes Predict Reading Development	Frontiers in Psychology	No	19		Between	Task fMRI	Rhyming task, network metrics	Change in reading skill	Regression	Univariate	Regression	None			Pearson correlation
61	https://doi.org/10.1016/j.neuroimage.2018.09.058	Interactions between neural decision-making circuits predict long-term dietary treatment	NeuroImage	Yes	30		Between	Task fMRI	Cue-reactivity and delay discounting tasks with food images	Change in BMI	Regression	Multivariate	Regression	None			Regression p-value

		success in obesity															
62	https://doi.org/10.1016/j.ebiom.2018.09.012	Disrupted asymmetry of inter- and intra-hemispheric functional connectivity in patients with drug-naive, first-episode schizophrenia and their unaffected siblings	EBioMedicine	Yes	46		Between	rsfMRI	Voxel-wise FC (inter- vs intra-hemispheric)	Schizophrenia symptom response to pharmacological treatment	SVM	Multivariate	Classification	LOO	No	No	Classification accuracy
63	https://doi.org/10.1073/pnas.1804641115	Dedifferentiation of caudate functional connectivity and striatal dopamine transporter density predict memory change in normal aging	PNAS	Yes	54		Between	rsfMRI	FC	Change in memory performance over time	Regression	Univariate	Regression	None			Other
64	https://doi.org/10.1007/s13365-017-0607-z	Neural response to working memory demand predicts neurocognitive deficits in HIV	Journal of NeuroVirology	Yes	24		Between	Task fMRI	N-back task	Cognitive performance	Regression	Univariate	Regression	None			Regression p-value
65	https://doi.org/10.1016/j.neuroimage.2018.08.060	Cortical activation associated with motor preparation can be used to predict the freely chosen effector of an upcoming movement and reflects response time: An fMRI decoding study	NeuroImage	No	12		Within	Task fMRI	Finger movement task	Free hand choice for motor action	Other	Multivariate	Classification	K-fold	Yes	No	Classification accuracy
66	https://doi.org/10.3389/fninf.2018.00051	Sparse Ordinal Logistic Regression and Its Application to Brain Decoding	Frontiers in Neuroinformatics	No	1	From previous literature	Within	Task fMRI	Visual task	Presented visual stimulus	Other	Multivariate	Regression	K-fold	No	No	Spearman correlation

67	https://doi.org/10.1016/j.jneumeth.2018.08.021	Image categorization from functional magnetic resonance imaging using T functional connectivity	Journal of Neuroscience Methods	No	14		Within and between	Task fMRI	Visual task	Category of image stimulus	SVM, random forest	Multivariate	Classification	K-fold	No	No	Classification accuracy
68	https://doi.org/10.1016/j.neuroimage.2018.08.035	Relation of neural response to palatable food tastes and images to future weight gain: Using bootstrap sampling to examine replicability of neuroimaging findings	NeuroImage	Yes	135		Between	Task fMRI	Food viewing and tasting tasks	Future BMI gain	Regression	Univariate	Regression	None			Pearson correlation
69	https://doi.org/10.1093/cercor/bhy200	Decomposing Parietal Memory Reactivation to Predict Consequences of Remembering	Cerebral Cortex	No	28		Between, pooled	Task fMRI	Memory task, pattern similarity between original presentation and memory test trial	Correct rejection/false alarm for lure stimuli during recollection task	Lasso logistic regression	Multivariate	Classification	LXO	Yes	No	Classification accuracy
70	https://doi.org/10.1093/ijnp/pyy069	Predicting Treatment Response in Depression: The Role of Anterior Cingulate Cortex	International Journal of Neuropsychopharmacology	Yes	32		Between	Task fMRI	Facial affect task	Response to escitalopram	Other	Multivariate	Classification	LOO	No	No	Classification accuracy
71	https://doi.org/10.1016/j.dcn.2018.07.003	Individual differences in functional brain connectivity predict temporal discounting preference in the transition to adolescence	Developmental Cognitive Neuroscience	No	148		Between	rsfMRI, age	FC	Temporal discounting behavior	Regression	Multivariate	Regression	None			Regression p-value
72	https://doi.org/10.1016/j.schres.2018.07.045	Cognitive control network dysconnectivit	Schizophrenia Research	Yes	28		Between	Task fMRI	Stroop task, FC	Pharmacological treatment response	Regression	Univariate	Regression	None			Regression p-value

		y and response to antipsychotic treatment in schizophrenia															
73	https://doi.org/10.1162/jocn_a_01218	Memory Contextualization: The Role of Prefrontal Cortex in Functional Integration across Item and Context Representational Regions	Journal of Cognitive Neuroscience	No	21		Between	Task fMRI	Contextual memory task, FC	Difference in memory performance between same-context and switched-context trials	Other	Univariate	Regression	None			Regression p-value
74	https://doi.org/10.1089/neu.2018.5739	Longitudinal Resting State Functional Connectivity Predicts Clinical Outcome in Mild Traumatic Brain Injury	Journal of Neurotrama	Yes	91		Between	rsfMRI	Network connectivity	Symptom severity	Regression	Univariate	Regression	None			Regression p-value
75	https://doi.org/10.1002/hipo.23003	Functional connectivity in category-selective brain networks after encoding predicts subsequent memory	Hippocampus	No	20		Between	rsfMRI	FC	Memory performance	Regression	Univariate	Regression	None			Pearson correlation
76	https://doi.org/10.1016/j.neuropsychologia.2018.07.004	Neural activity to threat in ventromedial prefrontal cortex correlates with T individual differences in anxiety and reward processing	Neuropsychologia	No	26		Between	Task fMRI	Threat response task	Efficiency in reward processing	Regression	Univariate	Regression	None			Explained variance
77	https://doi.org/10.1523/JNEUROSCI.3336-17.2018	Neural Computations Underlying Causal Structure Learning	Journal of Neuroscience	No	20		Between	Task fMRI	Predictive accuracy from given ROI signal for behavior on training trials	Task performance (context- and cue-based outcome prediction)	Other	Univariate	Regression	None			Pearson correlation

78	https://doi.org/10.1162/netn_a_00010	Fluid and flexible minds: Intelligence reflects synchrony in the brain,Äôs intrinsic network architecture	Network Neuroscience	No	830	HCP	Between	rsfMRI	Network connectivity	Fluid intelligence and cognitive flexibility	LASSO regression	Multivariate	Regression	None			Pearson correlation
79	https://doi.org/10.1162/jocn_a_01288	The Fusiform and Occipital Face Areas Can Process a Nonface Category Equivalently to Faces	Journal of Cognitive Neuroscience	No	21		Between	Task fMRI	Same-different object task	Reaction time	Regression	Univariate	Regression	None			Explained variance
80	https://doi.org/10.1089/cap.2017.0030	Neurofunctional Correlates of Response to Quetiapine in Adolescents with Bipolar Depression	Journal of Child and Adolescent Psychopharmacology	Yes	10		Between	Task fMRI	Affective pictures task	Response to bipolar treatment	Regression	Univariate	Regression	None			Explained variance
81	https://doi.org/10.1016/j.neuropsychologia.2018.05.002	Connectivity patterns in cognitive control networks predict naturalistic multitasking ability	Neuropsychologia	No	106		Between	rsfMRI	FC, network metrics	Multitasking performance	SVM, linear regression	Multivariate and univariate	Regression	K-fold	No	No	Pearson correlation
82	https://doi.org/10.1002/hbm.24200	Estimation of vocational aptitudes using functional brain networks	Human Brain Mapping	No	112		Between	rsfMRI	FC	Vocational aptitudes	SVM	Multivariate	Classification	K-fold	No	Yes	Classification accuracy
83	https://doi.org/10.3766/jaaa.16149	fMRI as a Preimplant Objective Tool to Predict Children,Äôs Postimplant Auditory and Language Outcomes as Measured by Parental Observations		Yes	12		Between	Task fMRI	Auditory task	Language skills 2 years post-implant	Regression	Univariate	Regression	None			Spearman correlation
84	https://doi.org/10.3389/fnagi.2018.00094	Resting-State Functional Connectivity Predicts Cognitive Impairment	Frontiers in Aging Neuroscience	Yes	59		Between	rsfMRI	FC, network metrics	Alzheimer's disease score	Linear regression	Univariate	Regression	LOO	Yes	No	Spearman correlation

		Related to Alzheimer,Äôs Disease															
85	https://doi.org/10.1016/j.conctc.2018.02.003	Effects and mechanism of the HECT study (hybrid exercise-cognitive trainings) in mild ischemic stroke with cognitive decline: fMRI for brain plasticity, biomarker and behavioral analysis	Contemporarty Clinical Trials Communications	Yes	75		Between	rsfMRI		Improvements in cognitive performance				None			
86	https://doi.org/10.1016/j.bpsc.2018.03.005	Blunted Frontostriatal Blood Oxygen Level-Dependent Signals Predict Stimulant and Marijuana Use	Biological Psychiatry: CNNI	Yes	110		Between	Task fMRI	Risky gains task	Problem stimulant use	Regression	Univariate	Classification	None			Other
87	https://doi.org/10.1002/pchj.212	Intrinsic spontaneous brain activity predicts individual variability in associative memory in older adults	PsyCh Journal	Yes	102		Between	rsfMRI	ALFF, FC	Memory task performance	Regression	Univariate	Regression	None			Correlation
88	https://doi.org/10.1038/s41467-018-03664-4	Towards a new approach to reveal dynamical organization of the brain using topological data analysis	Nature Communications	No	18	From previous literature	Between	Task fMRI	Network metrics	Cognitive task performance	Regression	Univariate	Regression	None			Correlation
89	https://doi.org/10.1016/j.neuropsychologia.2018.03.037	Neural overlap of L1 and L2 semantic representations across visual and auditory modalities: a decoding approach	Neuropsychologia	No	22		Within	Task fMRI	Activation pattern associated with reading or hearing words in one language	Word read/written/said/heard in other language	K nearest neighbors	Multivariate	Classification	K-fold	Yes	No	Other
90	https://doi.org/10.1016/j.psyneuen.	Diet matters: Glucocorticoid-related	Psychoneuroendocrinology	Yes	34		Between	rsfMRI	FC	Caloric intake, weight	Regression	Univariate	Regression	None			Pearson correlation

	2018.03.008	neuroadaptations associated with calorie intake in female rhesus monkeys								gain, body fat gain							
91	https://doi.org/10.1093/scan/nsy007	Global brain dynamics during social exclusion predict subsequent behavioral conformity	Social Cognitive and Affective Neuroscience	No	57		Between	Task fMRI	Social inclusion/exclusion task, used difference in regional global connectivity during inclusion and exclusion trials	Future conformity behavior		Multivariate	Regression	LOO	Yes	No	Explained variance, RMSE
92	https://doi.org/10.1016/j.dcn.2018.02.005	Neural cognitive control moderates the association between insular risk processing and risk-taking behaviors via perceived stress in adolescents	Developmental Cognitive Neuroscience	No	167		Between	Task fMRI	Lottery choice and cognitive control tasks	Perceived stress, risk-taking behaviors	Other	Multivariate	Regression	None			Regression p-value
93	https://doi.org/10.1038/s41398-017-0005-6	Stimulated left DLPFC-nucleus accumbens functional connectivity predicts the anti-depression and anti-anxiety effects of rTMS for depression	Translational Psychiatry	Yes	22		Between	rsfMRI	ALFF, FC, regional homogeneity	rTMS treatment response	Regression	Univariate	Regression	None			Pearson correlation
94	https://doi.org/10.1523/JNEUROSCI.2307-17.2018	Human V4 Activity Patterns Predict Behavioral Performance in Imagery of Object Color	Journal of Neuroscience	No	18		Within	Task fMRI	Color viewing/visualizing task	Color of real object or of mental imagery	Other	Multivariate	Classification	LXO	Yes	No	Classification accuracy
95	https://doi.org/10.1016/j.neuroimag	Decoding the neural signatures of	NeuroImage	No	54		Within	Task fMRI	Auditory task	Emotion of presented sound	SVM	Multivariate	Classification	LXO	No	No	Classification accuracy

	e.2018.02.058	emotions expressed through sound															
96	https://doi.org/10.1016/j.ijpsycho.2018.02.001	Interoception sensitivity in the parental brain during the first months of parenting modulates children's somatic symptoms six years later: The role of oxytocin	International Journal of Psychophysiology	No	45		Between	Task fMRI	Infant interaction task	Child somatic symptoms (6 years later)	Regression	Univariate	Regression	None			Pearson correlation
97	https://doi.org/10.1016/j.yebeh.2017.11.018	Adapting a memory fMRI research protocol in clinical routine: Feasibility and results	Epilepsy & Behavior	Yes	18		Between	Task fMRI	Memory task	Postoperative memory decline in medial temporal lobe epilepsy			Classification	None			Classification accuracy
98	https://doi.org/10.1016/j.drugalcdep.2017.12.015	Psychosocial and neural indicators of resilience among youth with a family history of substance use disorder	Drug and Alcohol Dependence	Yes	57		Between	Task fMRI	Go/No-Go task	Resilience in early adolescence	Regression	Multivariate	Classification	None			Other
99	https://doi.org/10.1093/scan/nsy002	Resting-state functional connectivity predicts neuroticism and extraversion in novel individuals	Social Cognitive and Affective Neuroscience	No	114		Between	rsfMRI	FC	Big 5 trait scores	Linear regression	Multivariate	Regression	LOO	Yes	No	Pearson correlation
100	https://doi.org/10.1016/j.jpsychires.2018.01.001	Resting-state fMRI signals in offspring of parents with bipolar disorder at the high-risk and ultra-high-risk stages and their relations with cognitive function	Journal of Psychiatric Research	Yes	50		Between	rsfMRI	ALFF, FC	Cognitive performance	Regression	Univariate	Regression	None			Regression p-value