

## Supplementary Material S1: Complete Search Strategies for All Databases

**1. PubMed:** ("Autism Spectrum Disorder"[MeSH Terms] OR "Autism Spectrum Disorder"[Title/Abstract] OR ASD[Title/Abstract] OR Autism\*[Title/Abstract])

AND

("Machine Learning"[MeSH Terms] OR "Deep Learning"[MeSH Terms] OR "Artificial Intelligence"[MeSH Terms] OR "machine learning"[Title/Abstract] OR "deep learning"[Title/Abstract] OR "artificial intelligence"[Title/Abstract] OR classific\*[Title/Abstract] OR predict\*[Title/Abstract])

AND

("Magnetic Resonance Imaging"[MeSH Terms] OR "Electroencephalography"[MeSH Terms] OR fMRI[Title/Abstract] OR "functional MRI"[Title/Abstract] OR "functional magnetic resonance"[Title/Abstract] OR "resting state"[Title/Abstract] OR rs-fMRI[Title/Abstract] OR neuroimaging[Title/Abstract] OR "behavioral data"[Title/Abstract] OR phenotypic[Title/Abstract] OR demographic[Title/Abstract] OR multimodal[Title/Abstract])

**2. IEEE Xplore:** ("Document Title": "Autism Spectrum Disorder" OR "Abstract": "ASD" OR "Abstract": "Autism") AND ("Document Title": "machine learning" OR "Abstract": "deep learning" OR "Abstract": "artificial intelligence") AND ("Document Title": "fMRI" OR "Abstract": "neuroimaging" OR "Abstract": "behavioral data")

**3. Scopus:** TITLE-ABS-KEY ("Autism Spectrum Disorder" OR ASD OR Autism\*) AND TITLE-ABS-KEY ("machine learning" OR "deep learning" OR "artificial intelligence") AND TITLE-ABS-KEY (fMRI OR "functional MRI" OR neuroimaging OR "behavioral data")

**4. ACM Digital Library:** [Abstract: "Autism Spectrum Disorder" OR Abstract: ASD] AND [Abstract: "machine learning" OR Abstract: "deep learning"] AND [Abstract: fMRI OR Abstract: neuroimaging]