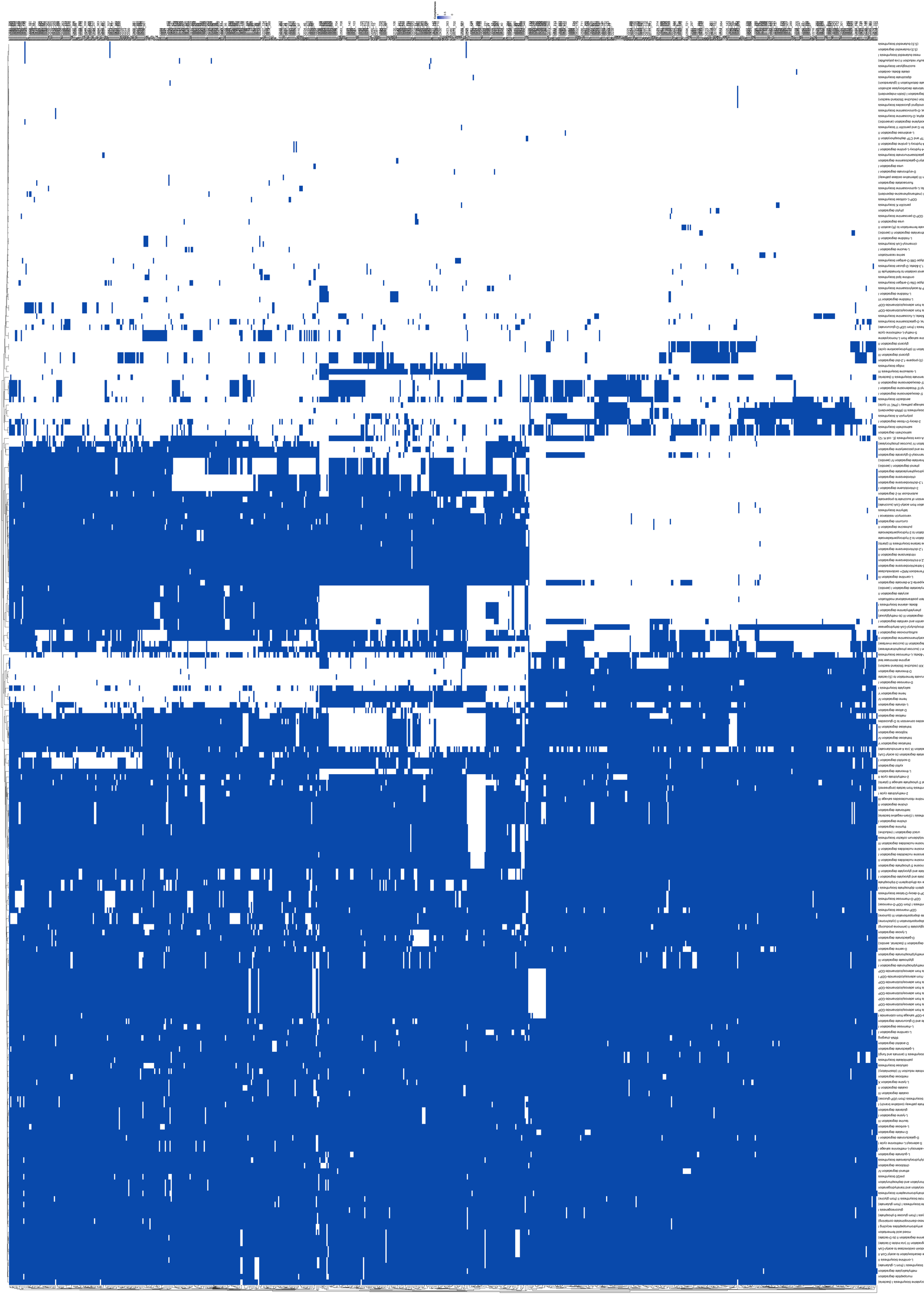
Completeness
1.0
0.5
0
Reactions
Metabolites
Genes
Biomass
Exchanges
Transports
Dead-ends
Blocked
Orphans
Connectivity
Stoichiometric consistency
Thermodynamic consistency
Essentiality
Growth
Carbon sources
Nitrogen sources
Phosphorus sources
Sulfur sources
Cofactors
Amino acids
Nucleotides
Lipids
Cell wall
Energy
Redox
Stress
Secretion
Regulation
Transport
Storage
Signaling
Quality
Curation
Documentation
Validation
Performance
Scalability
Reproducibility
Interoperability
Accessibility
Maintenance
Versioning
Licensing
Attribution
Citation
Dissemination
Training
Support
Community
Governance
Sustainability
Ethics
Safety
Biosecurity
Environmental impact
Carbon footprint
Energy efficiency
Water usage
Waste
Recycling
Upcycling
Downcycling
Cascade
Synergy
Antagonism
Toxicity
Allergenicity
Pathogenicity
Virulence
Antibiotic resistance
Drug resistance
Pesticide resistance
Herbicide resistance
Fungicide resistance
Bioremediation
Biodegradation
Biosynthesis
Bioconversion
Biotransformation
Bioassay
Biosensor
Biochip
Biomarker
Diagnostic
Therapeutic
Vaccine
Adjuvant
Excipient
Preservative
Stabilizer
Emulsifier
Surfactant
Solvent
Catalyst
Enzyme
Substrate
Product
Intermediate
Cofactor
Coenzyme
Prosthetic group
Metal ion
Salt
Buffer
Acid
Base
Oxidant
Reductant
Chelator
Ligand
Receptor
Antagonist
Agonist
Inhibitor
Activator
Modulator
Regulator
Transcriptomics
Proteomics
Metabolomics
Lipidomics
Glycomics
Metagenomics
Metatranscriptomics
Metaproteomics
Metabolomics
Fluxomics
Interactomics
Epigenomics
Chromatin
Nucleosome
Histone
DNA methylation
Gene expression
Protein expression
Metabolite
Flux
Pathway
Network
Module
Motif
Scaffold
Hub
Bottleneck
Leaf
Branch
Loop
Cycle
Path
Distance
Centrality
Degree
Betweenness
Closeness
Eigenvector
Clustering coefficient
Modularity
Assortativity
Homophily
Heterophily
Preferential attachment
Small world
Scale-free
Hierarchical
Modular
Nested
Bipartite
Tripartite
Multipartite
Hypergraph
Simplicial complex
Topological data analysis
Persistent homology
Betti number
Euler characteristic
Curvature
Ricci curvature
Forman curvature
Gromov-Hyperbolicity
Diameter
Radius
Eccentricity
Shortest path
Random walk
Diffusion
Percolation
Epidemic
Contagion
Cascade
Synchronization
Oscillation
Chaos
Bifurcation
Attractor
Basin of attraction
Phase space
Lyapunov exponent
Entropy
Information
Mutual information
Transfer entropy
Causality
Granger causality
Correlation
Covariance
Regression
Classification
Clustering
Dimensionality reduction
Feature selection
Feature extraction
Embedding
Attention
Transformer
Recurrent neural network
Convolutional neural network
Graph neural network
Reinforcement learning
Supervised learning
Unsupervised learning
Semi-supervised learning
Self-supervised learning
Transfer learning
Meta-learning
Ensemble
Bagging
Boosting
Stacking
Random forest
Decision tree
Support vector machine
Naive Bayes
Logistic regression
Linear regression
Nonlinear regression
Time series
Forecasting
Anomaly detection
Outlier detection
Novelty detection
Change point detection
Trend
Seasonality
Cycle
Periodicity
Chaotic
Stochastic
Deterministic
Probabilistic
Fuzzy
Rough
Grey
Neutrosophic
Quantum
Classical
Hybrid
Multi-scale
Micro
Meso
Macro
Global
Local
Intra-cellular
Inter-cellular
Tissue
Organ
Organism
Population
Community
Ecosystem
Biosphere
Anthropogenic
Natural
Artificial
Synthetic
Wild-type
Mutant
Knockout
Knockdown
Overexpression
Heterologous
Homologous
Chimeric
Fusion
Tag
Marker
Reporter
Probe
Primer
Adapter
Linker
Promoter
Enhancer
Silencer
Insulator
Terminator
Operon
Regulon
Stimulon
Modulon
Transcriptome
Proteome
Metabolome
Lipidome
Glycome
Metagenome
Metatranscriptome
Metaproteome
Metabolome
Fluxome
Interactome
Epigenome