

□ Computational

Computational refers to the use of computer-based methods, models, or algorithms to analyze data, simulate systems, or solve complex problems — especially when the scale or complexity exceeds what can be handled manually.

□ In the context of biomedical or neurosurgical research: Computational methods involve the processing and interpretation of large-scale datasets (e.g., genomics, imaging, clinical records) using mathematics, statistics, and programming — often through tools like machine learning, simulations, or network analysis.

□ Example Applications: Analyzing thousands of genes in multi-omics studies

Using machine learning to predict disease risk

Simulating brain activity or surgical outcomes

Modeling protein structures or drug interactions

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