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Evolution of computational neuroscience

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Computational neuroscience is the field of research which studies mathematical approach to neural coding and brain dynamics. This field of science has come a long way from describing the activity of single nerve cell in a scientific way to understanding the mechanism of billions of nerve cells processing inputs from our senses to coordinate our body movements. The extensive information about neuroscience gained by the application of mathematical techniques combined with an equally advanced computer simulation of the process has helped to find causes for various dysfunctions of the brain. The fields of differential equations, linear algebra, graph theory, and statistics are the core of mathematics used to unravel the enigma of brain mechanisms. This paper intends to discuss the history of the development of computational neuroscience with the vital role of mathematical applications.

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