Artificial Neural Networks - A Review of Applications of Neural Networks in the Modeling of HIV Epidemic

Abstract

Neural networks have been applied successfully to a broad range of fields such as finance, data mining, medicine, engineering, geology, physics and biology. In finance, neural networks have been used for stock market prediction, credit rating, bankruptcy prediction and economic indicator forecasts. In medicine, neural networks have been used extensively in medical diagnosis, detection and evaluation of medical conditions and treatment cost estimation. Furthermore, neural networks have found application in data mining projects for the purposes of prediction, classification, knowledge discovery, response modeling and time series analysis. This review paper will present the application of neural networks to the study of HIV. HIV research falls into four broad areas namely, behavioral research, diagnostic research, vaccine research and biomedical research. Most of the research publications featured in this review paper emanate from the four broad HIV research areas and will be presented in three categories namely prediction, classification and function approximation.

References

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Index Terms

Computer Science

Keywords
Multi-layer Perceptrons  Neural Networks  HIV/AIDS