

論整合神經網路和影響圖的效能

On the Effectiveness of Integrating

Probabilistic Neural Networks with Influence

Diagrams

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Abstract

Although neural networks indeed offer important new approaches to information processing, it is now a general trend to incorporate conventional computer methodologies for inferences and explanations in the hope of getting closer to human performance. In this study, we propose influence diagrams as a means of not only providing probabilistic inference but also reducing system complexity.

Keywords: neural networks, influence diagrams, complexity.

摘要

眾所皆知，神經網路(Neural Networks)具有良好的學習能力、錯誤容忍力、以及大量的平行處理能力；但是，欠缺推論和解釋能力。本研究旨在結合影響圖(Influence Diagrams)的經濟、效率和彈性，為神經網路提供較接近人類的推論和解釋能力。特別是，此整合網路在降低神經網路結構複雜性和