

技术方法

航空遥感数据的贝叶斯网络分类

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摘要:

介绍了利用贝叶斯网络对航空遥感数据进行分类的算法和过程,认为贝叶斯网络具有以下优点:充分利用和综合了先验知识

与样本信息;采用有向无环图(DAG)的方式描述了多特征数据间的相互关系;给出了联合概率表,并通过联合概率表给出了每个

像元属于不同类别的概率。研究表明,贝叶斯网络可以为遥感数据分类提供一种新方法。

关键词: 航空遥感数据 贝叶斯网络 分类

THE APPLICATION OF THE BAYESIAN NETWORK METHOD TO AIRBORNE DATA CLASSIFICATION

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Abstract:

In this paper, the technical procedures and data analysis in using Bayesian network to process airborne data are described. The result shows that the Bayesian network method has three advantages. First, both the prior

probability and features are used to establish the probability estimation weighing relations shown in associated

probability chart; Second, the linkage of the directed acyclic graph (DAG) and classes can clearly show the

relations between independence vectors (bands) and classes; Third, according to the contribution degree of three

inputted bands quantitatively shown in associated probabilities for each class, the prior probability can be

revised. The study results suggest that Bayesian network is likely to become a new practical method for remote

sensing data processing.

Keywords: Airborne Data Bayesian network Classification

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