2022年第28期总349期

农业与资源环境信息工程专题

本期导读

学术文献

1．智慧农业信息服务发展的国际经验与启示

会议论文

1．基于深度学习的精准畜牧业牛尾检测与跟踪

2．大数据在智能政务管理中的应用——以自然资源管理为例

3．农业供应链中区块链技术研究

科技报告

1．共同农业政策中的数据——大数据在政策评估中的未实现潜力

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学术文献

1．智慧农业信息服务发展的国际经验与启示

简介：大数据、物联网、云计算、智能装备等新兴技术与农业快速融合，推动农业向智慧化发展。在全球农业现代化发展背景下，智慧农业信息服务成为高效、精准化农业生产的重要支撑。针对我国农业信息服务存在服务体系不完善、服务渠道不畅通、农业信息化水平区域差异性大、信息服务供需不平衡、信息化服务人才匮乏等问题，总结分析美国、西欧、日本、韩国等农业发达国家或地区在农业信息服务体系建设、农业信息服务模式以及智慧农业信息服务发展等方面的有益经验与做法，结合我国智慧农业发展的要求，提出我国智慧农业信息服务发展应注重政府在农业信息服务中的主导地位、重视农业信息服务领域法律法规和标准建设、强化农业信息服务基础设施和网络体系建设、借助新兴信息技术打造智慧型农业信息服务模式、不断提升农户及涉农企业等经营主体的信息素养和建设社会化农业信息服务体系等对策建议。

来源：中国农业科技导报

发布日期:2022-07-07

全文链接:http://agri.ckcest.cn/file1/M00/03/37/CsgkOYcdRrCASP-hAA2FzpVRa9Y992.pdf

会议论文

1．Deep Learning-Based Cow Tail Detection and Tracking for Precision Livestock Farming(基于深度学习的精准畜牧业牛尾检测与跟踪)

简介：Cow tail detection and tracking in videos provide valuable information for individual identification, calving process, behavior analysis, and body condition monitoring. Although deep learning-based detection methods have demonstrated good performance, many of them have high complexity and still require an improvement in video object detection by reducing the computation time and false positives. To fully exploit the interframe information and achieve a real-time online detection, the optimized cow tail detection and tracking method is proposed based on an improved single shot multibox detector (SSD) and Kalman filter. Here, our improved SSD-integrated DenseNet and Inception-v4 reduce detection information loss and network parameters. Then, an improved window function-based Kalman filter and Hungarian are adopted to remove error detections and enhance the cow tail tracking accuracy. Experiments on our acquired rear-view videos show that the proposed approach achieved fast tail detection with an accuracy of 96.97%, a speed of 96 fps, a smaller model size of 25 MB, and higher position accuracy with an average 6.45 pixels deviation. The proposed approach outperformed the region-based R-CNN models and other tracking methods (e.g., particle filter), which provides a new solution to automatic cow detection and tracking in smart livestock farming.

来源：IEEE/ASME Transactions on Mechatronics

发布日期:2022-06-22

全文链接:http://agri.ckcest.cn/file1/M00/03/37/CsgkOYcdQTeALJfQAEJtDWjRpQQ870.pdf

2 .Application of Big Data in Intelligent Government Affairs Management: An

Example in Natural Resources Management（大数据在智能政务管理中的应用——以自然资源管理为例）

简介：China's government affairs service has been rapidly evolving from the stage of data-guided to data-driven in recent years. The effective utilization of big data is a critical step toward developing a smart government affairs management system. Using natural resources big data as an example, this paper discusses the data architecture, spatial data analysis techniques and their applicability to intelligent land management system on a broad scale, as well as several technical challenges that must be addressed, such as integrated computing of multi-source distributed data, the lack of intelligence in the present government affairs management system, and the need for real-time collaboration between multi-level databases. This paper intends to broaden researchers' understanding of big data technology and application in the field of natural resources, and it serves as a reference point for big data in the pursuit of intelligent government affairs management.

来源： 2022 7th International Conference on Big Data Analytics (ICBDA)

发布日期:2022-04-22

全文链接:http://agri.ckcest.cn/file1/M00/10/09/CsgkOGLGj6iAQVLoACI2D8P7ZC8726.pdf

3 .A Study of Blockchain Technology in Agriculture Supply Chain（农业供应链中区块链技术研究）

简介：The chain of distribution management is predominant wherever the process occurs in stage-by-stage manner. Among the various types, agriculture Supply Chain Management is very critical as it is sensitive to failures. In India, the agriculture supply chain is very poor, and the farmers are not able to know the real condition of their goods. Hence, the farmers must accept the price given by the company person or the brokers. It would be better if there exists some technology helping them to view the status of their goods at the end of each stage. Blockchain is one such technology providing the user security and immutable storage of data. In this paper, the strategies applying Blockchain for the agriculture supply chain are analysed and inferred how-far the technology is utilized

来源： 2021 International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA)

发布日期:2022-01-22

全文链接:http://agri.ckcest.cn/file1/M00/10/09/CsgkOGLGlVGADzbmAAK_QbxlTmc036.pdf

科技报告

1．Data in the Common Agricultural Policy – Unrealised potential of big data for policy evaluations（共同农业政策中的数据——大数据在政策评估中的未实现潜力）

简介：在政策决策中使用基于证据的方法需要来自不同来源的各种数据和后续分析。本报告评估了欧盟委员会是否在共同农业政策的政策设计、监测和评估中充分利用了数据和数据分析，这些共同农业政策占欧盟预算的三分之一以上。 该报告证实欧盟委员会已采取多项举措来更好地利用现有数据。 然而，充分利用收集数据的障碍仍然存在。 由于数据聚合导致缺乏标准

化和规则等障碍降低了数据的可用性。 该报告针对此问题提出了一些建议，包括改进对欧盟成员国分类数据的使用。

来源： EU

发布日期:2022-06-28

全文链接:http://agri.ckcest.cn/file1/M00/03/37/CsgkOYcdP66AeV6YACrVm98ZHRk577.pdf