



2018年第45期总149期

农业与资源环境信息工程专题

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▶ 前沿资讯

1 .Creating FAIR and open agricultural data ecosystems (创建竞争公平和开放的农业数据生态系统)

简介: Agriculture is being transformed by data especially open data that is being used to help farmers, researchers and policymakers make more informed decisions. Farmers use it to decide how and when to fertilise, plant or harvest; researchers use it to access crucial information; policymakers need it for evidence-based investments, and other groups can use it to make services more efficient across the agriculture value chain. Earlier this year, GODAN worked with CABI, and the Open Data Institute worked with the Bill & Melinda Gates Foundation to explore how to enhance data access and sharing within agriculture programmes in four regions, Andhra Pradesh and Odisha (in India), Ethiopia and Tanzania.

来源: 全球农业与营养开放数据网 (GODAN)

发布日期:2018-10-18

全文链接:<https://www.godan.info/blog-posts/creating-fair-and-open-agricultural-data-ecosystems>

2 . Evaluating diverse solar irrigation systems for their scalability in India (评估各类太阳能系统在印度的可推广性)

简介: During his Independence Day speech this year, Shri Narendra Modi, the Prime Minister of India, presented the nation's expansive plans for farm solarization, among other schemes and objective. Irrigation is set to acquire a 'sunny side' with the distribution of 2.75 million solar pumps to farmers who will be helped by the installation of 10 gigawatt (GW) of solar power plants. Apart from extending cultivation, regularizing power supply and lowering emissions, the scheme known as the Kisan Urja Suraksha evam Utthaan Mahaabhiyan (KUSUM), also envisages extra income generation for the farmers through the sale of excess power back to the grid.The launch of the multi-billion dollar KUSUM scheme is testimony to India's major push towards growth in the agriculture sector, powered by renewables. The scheme's target is 100 GW of solar capacity by 2022, and in fact, it has already achieved a cumulative capacity of 20 GW.

来源: 国际农业研究磋商组织 (CGIAR)

发布日期:2018-10-29

全文链接:https://ccafs.cgiar.org/news/evaluating-diverse-solar-irrigation-systems-their-scalability-india#.W9gRu-Lt_IV

3 . Zooming in on Mexico's landscape (精准观测墨西哥景观)

简介: 作为与墨西哥航天局和其他墨西哥科学公共实体的科学合作的一部分, 欧洲宇航局结合哥白尼哨兵-任务的图像, 详细了解墨西哥整个国家不同类型的植被。高分辨率土地覆盖地图结合了哥白尼哨兵-2在2016年至2018年间捕获的图像。Sentinel-2是为欧盟哥白尼环境监测计划建造的双卫星设施。每个相同的卫星都带有一个多光谱成像仪, 可以区分不同类型的植被和作物。它还可用于测定许多植物指数, 例如叶片中叶绿素和

水的含量，以监测植物健康和生长的变化。

来源：欧洲宇航局 (ESA)

发布日期:2018-10-22

全文链接:http://www.esa.int/Our_Activities/Observing_the_Earth/Copernicus/Sentinel-2/Zooming_in_on_Mexico_s_landscape

➤ 学术文献

1 . Big Data for Internet of Things: A Survey (物联网大数据: 研究综述)

简介: With the rapid development of the Internet of Things (IoT), Big Data technologies have emerged as a critical data analytics tool to bring the knowledge within IoT infrastructures to better meet the purpose of the IoT systems and support critical decision making. Although the topic of Big Data analytics itself is extensively researched, the disparity between IoT domains (such as healthcare, energy, transportation and others) has isolated the evolution of Big Data approaches in each IoT domain. Thus, the mutual understanding across IoT domains can possibly advance the evolution of Big Data research in IoT. In this work, we therefore conduct a survey on Big Data technologies in different IoT domains to facilitate and stimulate knowledge sharing across the IoT domains. Based on our review, this paper discusses the similarities and differences among Big Data technologies used in different IoT domains, suggests how certain Big Data technology used in one IoT domain can be re-used in another IoT domain, and develops a conceptual framework to outline the critical Big Data technologies across all the reviewed IoT domains.

来源: Future Generation Computer Systems

发布日期:2018-10

全文链接:<http://agri.ckcest.cn/ass/4447371f-ae8f-49db-bd27-c4476ad3ae41.pdf>

2 . Agricultural Remote Sensing and Data Science in China (中国的农业遥感和数据科学)

简介: Data science and big data have been booming in the past 5 years in China. Remote sensing is one of the most important fields using big data. Agriculture is one of the most important and popular fields of remote sensing applications and data science. In the past decade, there have been rapid developments in agricultural remote sensing and data science, in China and all over the world. In this chapter, the research and applications in remote sensing for agriculture and data science in China are reviewed. Substantial progress in agricultural quantitative remote sensing inversion of crop and environmental parameters has been made. Remote sensing applications in cropland classification and crop mapping, crop growth monitoring, and crop yield estimation are widely presented. The operational China's agriculture remote sensing monitoring system is presented as an example to showcase remote sensing applications in agriculture. The second part of the chapter briefly describes the development of data science in China and the status quo of big data applications. Some examples of data science resource sharing and service platforms are also

presented.

来源: Federal Data Science

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全文链接: <http://agri.ckcest.cn/ass/697307cc-f0df-43e4-92f5-4efcae57f630.pdf>