农业与资源环境信息工程专题

本期导读

➤ 前沿资讯

➤ 会议论文

➤ 科技报告

更多资讯 尽在农业专业知识服务系统:http://agri.ckcest.cn/

➤ 前沿资讯

1．New AI app predicts climate change stress for farmers in Africa（新的AI应用帮助非洲农民预测气候变化压力）

简介：A new artificial intelligence (AI) tool available for free in a smartphone app can predict near-term crop productivity for farmers in Africa and may help them protect their staple crops -- such as maize, cassava and beans -- in the face of climate warming, according to Penn State researchers. The team will unveil the new tool -- which will work with their existing AI assistant, called "PlantVillage Nuru" -- to coincide with the United Nations Climate Action Summit to be held today (Sept. 23) at the U.N. Headquarters in New York City.

来源：EurekAlert

发布日期：2019-09-23

全文链接：http://agri.ckcest.cn/file1/M00/0E/C9/Csgk0F2NaCWAYlT4AAHxbqORBRk965.pdf

2．Harnessing artificial intelligence for climate science（利用人工智能进行气候科学研究）

简介：Over 700 Earth observation satellites are orbiting our planet, transmitting hundreds of terabytes of data to downlink stations every day. Processing and extracting useful information is a huge data challenge, with volumes rising quasi-exponentially. And, it's not just a problem of the data deluge: our climate system, and environmental processes more widely, work in complex and non-linear ways. Artificial intelligence and, in particular, machine learning is helping to meet these challenges, as the need for accurate knowledge about global climate change becomes more urgent.ESA's Climate Change Initiative provides the systematic information needed by the UN Framework Convention on Climate Change. By funding teams of scientists to create world-class accurate, long-term, datasets that characterise Earth's changing climate system, the initiative is providing a whole-globe view.

来源：欧洲宇航局（ESA）

发布日期：2019-09-18

全文链接：http://agri.ckcest.cn/file1/M00/00/02/Csgk0V2Mg_uADwQIAAImSttvecg100.pdf

3．How to build a community of Data Champions: Six Steps to Success（如何建立数据拥护者社区：成功的六个步骤）

简介：Inspired by the University of Cambridge Data Champion programme, we have built a community of Data Champions to advocate for good research data management (RDM) practice within all university faculties at TU Delft. Currently, we have 47 active members and the number is increasing. Here, we present a 'toolkit' to help you build a community of Data Champions within your academic institution.

来源：The Research Data Alliance

更多资讯 尽在农业专业知识服务系统：http://agri.ckcest.cn/

发布日期：2019-09-03

全文链接：http://agri.ckcest.cn/file1/M00/0E/C9/Csgk0F2NfLyABFZlAAMmZki44n0044.pdf

会议论文

1．Big Data in Agriculture Convention 2019（2019年农业大数据会议）

简介：Building resilient global food security requires us to navigate a complex net of interactions between the biosphere, economy, technology, and society. Machines and machine-to-machine systems shape and accelerate our social and economic lives, even as climates and ecosystems are threatened. Our ethical frameworks, human communities, and institutions struggle to stay abreast the rate of change. Therefore, we can no longer consider distinct facets of food security in isolation; we need holistic solutions. There are growing insights about how humanity can live within the natural, biological, and climatic boundaries of the planet. These new models offer great potential for managing ethics, multi-stakeholder coordination, and action as data and digital technologies demonstrate the agility, precision and insights needed to effectively manage this complexity.

来源：国际农业研究磋商组织（CGIAR）

发布日期：2019-09

全文链接：http://agri.ckcest.cn/file1/M00/0E/C9/Csgk0F2NaUeAX94GAAEsvIFhli0786.pdf

科技报告

1 Accelerating CGIAR'S digital transformation: A high-level assessment of digital strategy across CGIAR（加速国际农业研究磋商组织（CGIAR）的数字化转型：深入评估CGIAR数字化战略）

简介：The international development sector is no stranger to disruption; however, the speed and scope of change in the sector today is unprecedented. Moving forward, every economy will become a digital economy of some kind. The total value of digital transformation to industry and society will reach $100 trillion USD throughout the next decade, according to calculations by the World Economic Forum and Accenture. At the intersection of rapidly digitizing economies and dramatic changes in their environmental context, the agriculture development sector has arrived at a turning point: apply and unlock the value of digital tools and technologies or become increasingly ineffectual or irrelevant. We see the change happening already in ways that touch on the core mission of CGIAR. Commercial parties have already significantly reduced the breeding cycle time for crop improvement to three to four years, for example, by applying the computational power of digital technologies. Moreover, 95 percent of the global population already lives in areas with mobile network coverage and more than 90 percent of the projected new phone subscriptions in 2020 are based in developing economies, opening new avenues for

reaching underserved farmers and transforming agriculture in their favor. Soon, a majority of people on the planet will have interacted with some form of digital technology since childhood.The challenge of digital transformation also represents an opportunity: CGIAR can leverage digital disruption in the sector and create meaningful new and lasting responses to climate variability, food insecurity and malnutrition, and environmental degradation. To begin to identify the first steps forward, the Platform for Big Data in Agriculture engaged Accenture Development Partnerships to conduct a high-level assessment of the state of digital strategy and how this is reflected in the people, process, and technology investments across the organization. The findings and recommendations of this assessment are structured around five critical enablers for building an analytics-driven organization.

来源：国际农业研究磋商组织（CGIAR）

发布日期:2019-03

全文链接:http://agri.ckcest.cn/file1/M00/0E/C9/Csgk0F2Ne2-ASfwtAD_ysyYsvlw944.pdf