Smart Farming: Part-time further education in the agricultural sector by TUM

The digitization of agriculture is one of the most discussed topics in the industry. However, there is often a lack of concrete concepts for implementation. The Technical University of Munich (TUM) is offering a further education course for professionals starting in November 2021 for the first time at the TUM Institute for LifeLong Learning: The certificate program "Smart Farming and IoT in Agriculture" was designed with experts from the Chair of Agricultural Systems Engineering. It enables professionals to digitize processes in a scientifically sound manner and to develop a holistic understanding of smart farming.

What is the difference between smart farming and digital farming? Which technologies should farmers be familiar with in order to drive the digital transformation of their farm? How can specific agricultural processes be automated by connecting them to the Internet of Things (IoT)? These and other questions will be answered by the new certificate program "Smart Farming and IoT in Agriculture", which will start at TUM in November 2021. The goal: Our researchers want to help specialists from the agricultural sector be prepared for the successful digital transformation of the industry.

"Smart Farming has the potential to make agriculture even more efficient and robust against societal changes, but also even more resource-efficient and sustainable. There are a number of technologies that can make daily work in the agricultural sector much easier. However, this can only be successful if one knows which technologies are relevant for their company and how one can seamlessly integrate tools into existing processes and thereby digitize them," says Maximilian Treiber, a scientist at the Chair of Agricultural Systems Engineering at TUM, who played a leading role in developing the program together with his colleague Josef Bauerdick.

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Creating understanding the opportunities of Smart Farming and technology

"The role of farmers and agribusiness professionals is changing. If we can successfully make more and more processes automated, farmers can devote more of their attention to the areas of the company where their expertise is most needed," says Bauerdick. "That's why we deliberately want to impart our knowledge in a compact form in a part-time program – scientifically sound, and both practice- and future-oriented."

Particularly important to experts is the ability to integrate newly gained knowledge to their respective situation. Thus, in addition to introductions to terminology and technology, numerous practical exercises are built into the program. Among other things, participants learn to create an agricultural IoT system from sensor to dashboard. This gives them a deeper understanding of what is possible with current and future technologies and helps them explore the limits of the respective systems.

Bernhard Kraus, Managing Director at the TUM Institute for LifeLong Learning, explains: "TUM academics conduct cutting-edge research in natural science and technological disciplines. With the new certificate program 'Smart Farming and IoT in Agriculture', we are combining the topics of agriculture and technology for the first time and making our
findings available to professionals. In this way, they can be better prepared for the challenges posed by the digital transformation of agriculture."

Certificate program starts in November 2021

The part-time English-language certificate course will start in mid-November 2021 and will take place online as well as on-site in Freising near Munich (kick-off attendance weekend as well as excursion). It is aimed at professionals from the agricultural industry and related sectors at the interface of business and technology who would like to expand their knowledge of smart farming technologies and the digital transformation of agriculture. Upon successful completion, participants will receive an official certificate from TUM.

The current Corona regulations apply to all on-site implementations ensuring the safety of participants and teaching staff. Partners of the program include BayWa AG, Next Farming and geo-konzept GmbH.

URL zur Pressemitteilung: https://www.lll.tum.de/de/certificate/smart-farming-and-iot-in-agriculture/ (More information about the certificate program and the application process are available on the TUM Institute for LifeLong Learning website)
URL zur Pressemitteilung: https://www.lll.tum.de/
URL zur Pressemitteilung: http://www.exzellenz.tum.de/en
URL zur Pressemitteilung: https://mediatum.ub.tum.de/1618484
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