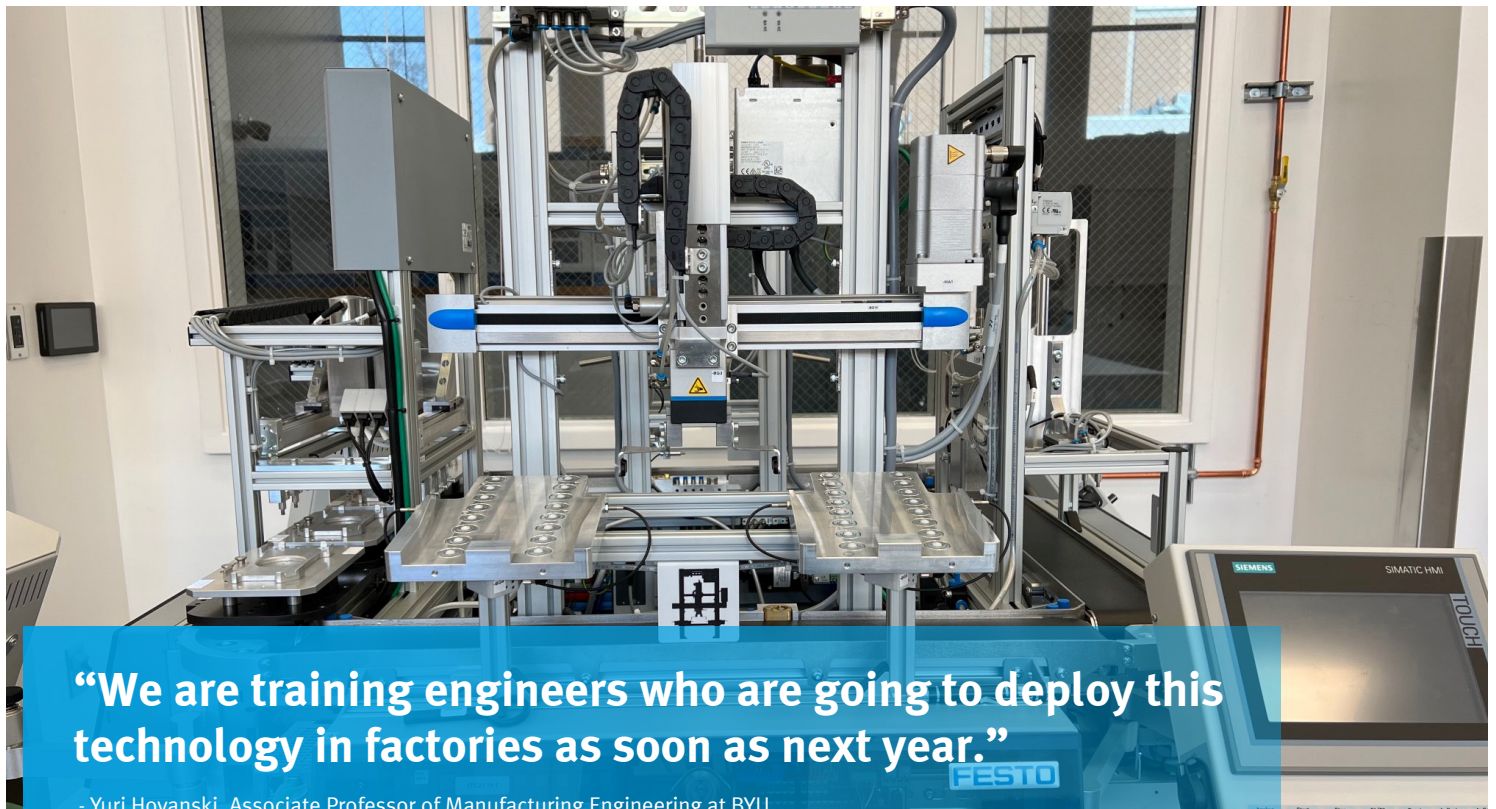


Elevating Augmented Reality in the Classroom

Brigham Young University

FESTO



“We are training engineers who are going to deploy this technology in factories as soon as next year.”

- Yuri Hovanski, Associate Professor of Manufacturing Engineering at BYU

The Customer

The Department of Manufacturing Engineering at Brigham Young University is committed to preparing its students to successfully enter today's manufacturing workforce by providing the real-world training and skills employers are looking for. BYU, by way of its partner PTC, joined forces with Festo Didactic to achieve a comprehensive approach to Industry 4.0 education and training.

The Challenge

Since 2016, BYU's Manufacturing Engineering Program has partnered with Boston-based software company PTC to develop and deploy smart manufacturing education and career training. BYU became well-versed in augmented reality (AR) thanks to support from PTC's product Vuforia and its diverse tool set. However, BYU's curriculum and PTC's software alone weren't enough to check all the boxes for comprehensive Industry 4.0 training.

The Solution

Together, Festo, BYU and PTC are powering a state-of-the-art classroom experience filled with data-rich AR experiences. Paired with PTC's Vuforia software, Festo's Cyber-Physical Lab hosts a full spectrum of AR capabilities to elevate AR instruction from Level 1 to 2, 3 and 4.

The four-station CP Lab enables students to experience the value of Industry 4.0 skill building - not only for advanced automation roles but as an immersive learning experience aligned with IIoT technology and cyber-physical reality.

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“Our focus when we built the curriculum here at BYU was to focus on what we could do that would be meaningful for students to understand how to step directly into industry and make a difference.”

- Yuri Hovanski



The Value



Yuri Hovanski
Associate Professor of
Manufacturing Engineering
at BYU

Festo's CP Lab is fulfilling a crucial role in supporting BYU's staff efforts to prepare students for competitive internship and entry-level job opportunities with local manufacturers including companies such as Boeing, Northrop Grumman, Fiero Automation, Autoliv, Rockwell Automation and US Synthetic.

“When we first started working with Festo, they already had augmented reality working on the CP Lab that was set up to focus on what we would call a Level 1 Experience. The importance of AR specifically on this hardware is that we can show the complete depth and breadth of what AR can do in a factory setting,” explained Professor Hovanski.

“Festo's CP Lab allows us to pull digital information from a manufacturing environment and tie that directly into augmented reality. The training we're providing is not a substitute for traditional education - it's changing how we educate by allowing complete interaction between the physical people and the digital infrastructure of the equipment. The full embedding of the digital and physical, which is the heart of Industry 4.0.

If we want to be able to embrace this notion of physical and digital connectivity in a factory, students have to be able to experience it in an academic setting so that when they find themselves in an industrial setting, they're not confused by how to make all these things work.

To me, it's great having the physical connectivity side partnered with Festo and the digital side matched up with the PTC team because it allows students to see what they're going to run into in industry.”

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