MIT Industrial Liaison Program Faculty Knowledgebase Report

Deep Learning vs. Profound Wisdom

September 11, 2020 11:00 am - 12:30 pm

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Deep Learning vs. Profound Wisdom – Why System Thinking Supercedes AI and ML in Your Organization
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John Carrier is a senior lecturer in the System Dynamics Group at the MIT Sloan School of Management and Managing Director of 532 Partners. His expertise is in shaping the dynamics of operating environments to improve productivity, quality, safety, and morale simultaneously. He has helped companies save hundreds of millions of dollars by helping them find and eradicate the hidden systems lurking inside every operation. His current focus is to help prepare companies to compete in the new environment of Industry 4.0.

He has educated over five hundred top-level leaders in the MIT Sloan Executive Education program in Oil & Gas, petrochemicals, mining, and healthcare. When not teaching, he spends most of his time in the operating environment, working directly with the front line to deliver measurable results in less than sixty days.

Dr. Carrier holds a B.S. in Chemical Engineering from the University of Michigan, a Ph.D. in Control Systems from MIT, and an MBA from the Harvard Business School.

While the current wave of "Deep Learning" business applications is showing some success, the upside of this approach is limited by the fact that it is heavily reliant on data, and ignores the fundamental principles of System Dynamics, Lean Operations, and Agile Management – a concept captured in W. Edward Deming's phrase, "Profound Wisdom". In this talk, we will explore how an understanding of the fundamental principles underlying successful organizations is critical to achieving transformational results from implementing the new technologies of Industry 4.0, including Machine Learning and Artificial Intelligence. We will also examine successful ML examples from Google and Stanford Medical School and show that these applications are based on classic Lean and Operational Improvement tools. We will also look at large scale failed applications due to a naïve reliance on "black boxes" led to predictably poor results. This session is a must for anyone looking to apply ML to drive performance improvement and risk reduction in complex, human-driven organizations.

12:00pm - 1:00pm

Startups

1. GenOne (https://genone.tech)
2. IIOT OXYS (http://www.oxyscorp.com)