DATA SCIENCES + OPERATIONS

DSO 464

DEEP LEARNING FOR AI & BUSINESS APPLICATIONS

Section(s): 16214

M/W from 4:00 – 5:50pm

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Units: 4.0

Office: BRI 307 J

WHY TAKE THIS COURSE?

If you are an undergraduate student who is interested in deep learning technologies for artificial intelligence (AI), and you want to understand and access the technology through hands-on coding in TensorFlow, Keras, and PyTorch, all while working through business-related case studies, then you should take this course!

AI tools play an increasingly important role in modern business and big data applications including new AI-based startups. In particular, deep learning has become the driving force of AI in recent years. This undergraduate elective course, which was created and offered initially in Spring 2018, provides an introduction to deep learning with a focus on business applications. It will help students learn the basics of deep learning technologies as well as some state-of-the-art developments that are reshaping and driving the modern business landscape. The course will greatly benefit students with strong interests in a future career or graduate program in business analytics or data science.

COURSE OBJECTIVES

Upon successful completion, students will be able to:
- Understand the basics of and utilize current technologies in deep learning and AI
- Gather, categorize, analyze, interpret, and evaluate relevant qualitative and quantitative information for deep learning and business applications
- Conduct research on real-world projects using deep learning tools

KEY CONCEPTS

- Neural networks and a neural network lens for artificial intelligence
- Shallow vs deep neural networks and quantitative investing
- Convolutional neural networks and recommender systems
- Autoencoders and generative adversarial networks and dynamic pricing
- Transformer networks for sentiment analysis and text generation
- Business applications

🌐 SCHEDULE OF CLASSES