

DATA SCIENCES AND OPERATIONS

FALL 2024 SEMESTER

DSO 575 – Driving Business

Transformation with GenAI and ML

16305 (ONLINE)

Professor

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Email

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When

Saturday: 9:00 AM – 11:50 AM (ONLINE)

Office

TBD

Units

3.0



WHO SHOULD TAKE THIS COURSE?

Directors, Senior Managers, Managers who are leading or going to lead initiatives to develop a business transformation strategy using Machine Learning and lead a team to develop machine learning models to enhance key business processes, save cost and improve customer engagement.

COURSE OBJECTIVES

1. Describe how machine learning (ML) can help businesses delight their customers
2. Build ML driven business transformation strategies and implementation roadmaps
3. Explain the strategic importance of Cloud and data platform modernization in an ML-driven transformation journey
4. Describe the technology components, team structure, skillsets and operating models required for a successful ML transformation
5. Using an appreciation for governance implications of ML and data, build a responsible and trusted ML platform
6. Demonstrate an understanding of epic, user story and backlog based “agile ways” of working

KEY CONCEPTS

1. Technology led Business Transformation
2. Transformative potential of Machine Learning
3. Cloud and Technology Modernization
4. Big Data Modernization in Cloud
5. Importance of Cloud and Big Data in Machine Learning
6. Agile way of working
7. Developing ML models embracing agile methods
8. Development Lifecycle of ML Models
9. Solution Architecture of ML Solutions
10. Production ML and Post deployment challenges
11. ML Operating Model
12. Building a high-performance team

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COURSE DESCRIPTION

This course enables business and technology executives to successfully lead Machine Learning driven business transformation programs on the Cloud. Machine Learning has the potential to reshape, redefine, and transform business processes. Advances in Cloud Computing is making more processing power, unlimited storage, and elastic resources available to develop high-performance ML applications. Despite the promise, harnessing the power of Cloud and ML for long-term business benefit has turned out to be challenging.

Companies have struggled with how to successfully navigate long-term ML fueled transformation that requires identifying the appropriate use cases for ML, instituting agile ways of working, building a skilled team, establishing a new operating model, grasping the impact of technology and architecture choices while delivering on short term business goals. In many cases, business technology executives in charge of these programs are left to figure out these complexities on their own. This course is designed to bridge the gap.

This course will start with discussing how modern companies are successfully implementing ML in the Cloud to develop new ways of doing business, to increase efficiency of business processes and rapidly innovate in the face of competitive pressure. Armed with current industry use cases of ML, students will start building outlines of a roadmap of ML implementation for their own organizations. They will learn the common pitfalls and challenges faced by the implementors of an ML roadmap along with current industry best practices and implementation methodology that will improve their ability to execute a long-term strategy for ML-enabled business transformation.

Students will also gain a deep appreciation of the modern technology platforms such as Cloud Computing, Data Modernization in Cloud and ML in Cloud. The course will discuss how to build high-performance teams with the right skillsets and an efficient operating model that are essential to implement an ML-driven enterprise business transformation program successfully.