



MIT Center for
Transportation & Logistics

ARTIFICIAL INTELLIGENCE/MACHINE LEARNING + SUPPLY CHAIN PLANNING

1 AMHERST ST., 3RD FLOOR (E40-356)
NOVEMBER 27-28, 2018

November 27

11:30 *Registration & lunch*

12:30 ***Welcome and Introductions*** – Jim Rice

1:00 ***Fundamentals of AI, ML, Analytics*** – Dr. Daniel Merchán

This first session reviews the fundamentals of artificial intelligence and discusses common applications to business problems. We will also review recent advances in methods and tools for predictive analytics and explore how these recent developments complement more classic descriptive and prescriptive models.

2:00 *Break and informal discussions*

2:15 ***Machine Learning Methods – Supervised Learning*** – Dr. Sergio Caballero

This session introduces supervised learning algorithms. It covers linear regression, k -nearest neighbors, classification and regression trees, and logistic regression. The session focuses on how these methods are used, provides examples, and discusses their strengths and limitations.

3:15 *Break and informal discussions*

3:30 ***Machine Learning Methods – Unsupervised Learning*** – Sergio Caballero and Daniel Merchán

This session introduces unsupervised learning algorithms. It focuses on how clustering techniques work and provides examples about how these methods are being used in supply chain applications.

4:15 *Break and informal discussions*

4:30 ***Advanced and State-of-the-Art Methods*** – Connor Makowski

This session will address several other methods considered to be advanced and emerging state-of-the-art approaches. Additionally, during this session you will be given the chance to ask open questions about applications to the instructor.

5:30 *Summation*

5:45 *Adjournment followed immediately by an informal reception*

November 28

8:00 *Continental breakfast*

8:30 ***Welcome and Introductions***

8:45 ***Introduction to Artificial Intelligence/Machine Learning in Supply Chain Planning***

Following this introduction on AI/ML application in supply chain planning, the balance of the morning will be broken into several segments to discuss specific application:

- Demand Management
- Inventory Management
- Transportation Planning
- Warehouse Operations Planning
- Revenue Management/Pricing (considering Demand and Supply)

12:00 *Lunch*

1:00 ***Challenges in Applying AI/ML***

2:00 *Break and informal discussions*

2:15 ***Getting Started: People, Methods, Data, Tools***

3:15 ***Future Applications of AI in Supply Chain Planning***

4:45 *Summary Discussion*

5:00 *Adjourn*