



## Workshop on Data Science and Applications (DSA 2018)

The Department of Mathematics and Statistics cordially invites you to a workshop on **Data Science and its Applications** presented by distinguished speakers from American Express, SAS, Unilever, HSBC and EMLC.ai.

Date: Thursday, November 15, 2018

Time: 9:30 a.m.–4:30 p.m.

Location: Hall B, Main Building

9:30–10:00 a.m.	<b>Welcome Coffee and Refreshments</b>
10:00–10:15 a.m.	<b>Opening Remarks</b> <b>Dr. Mahmoud Anabtawi</b> , Dean, College of Arts and Sciences <b>Dr. Hana Sulieman</b> , Head, Department of Mathematics and Statistics
10:20–11:10 a.m.	<b>Machine Learning Powers Better Decisioning in Financial Services</b> <b>Dr. Dmitry Efimov</b> , Director, Machine Learning and Data Science, American Express  <b>Talk Abstract</b> Machine Learning plays an essential role in many American Express use cases. We use advanced machine learning techniques to detect fraud transactions, forecast customers' default and assign credit limit. These techniques give tremendous impact for the company and allow to save a lot of money and time. During this talk we will describe how Machine Learning and Data Science methods are leveraged inside American Express. The basic ideas of cutting-edge innovative approaches such as generative adversarial networks, factorization machines and recurrent neural networks, will be also introduced. We will explain why these state-of-the-art techniques have a huge potential for the company and how they can help to improve current models.
11:10–12:00 p.m.	<b>Advancing with AI</b> <b>Badshah Mukherjee Kumar</b> , Practice Lead of Advanced Analytics, SAS Middle East, SAS  <b>Talk Abstract</b> AI is everywhere; we experience AI in our daily life such as digital voice assistant, real-time traffic updates, and product suggestions on an e-commerce website. The talk on "Advancing with AI" is focused on the critical enablers of AI and customer stories of AI application in non-profit, sports, healthcare, judiciary, wildlife conservation, energy, manufacturing and many more domains.

12:00–12:50 p.m.	<b>Data Science Projects in B2B Corporates</b> <b>Baha Khalil</b> , Data and Analytics Manager, Unilever  <b>Talk Abstract</b> Discussions of the practical implementation of a Data Science project. In practice, implementing a project at a scale that can be used by the users in industry is more challenging than creating a proof of concept on a local machine. We will discuss the current cloud tools (storage, computing-engine, visualization tools, etc.) used to implement any Data Science project. Also, the talk will also show the results a real project that was implemented for Unilever Food Solutions (UFS) which helped in customer's allocations process within the sales teams. An unsupervised techniques used to segment the customers based on the sales, customer's interactions and other variables.
1:00–2:30 p.m.	<b>Lunch Break</b>
2:30–3:20 p.m.	<b>Data Science Applications in Financial Services Industry. Are We Ready for What Is Coming?</b> <b>Alok Gupta</b> , Regional Head of Risk Models, and <b>Ebru Jouzy</b> , Regional Head of Global Risk Analytics, HSBC Middle East Ltd.  <b>Talk Abstract</b> The need for adoption of advanced decision science tools like Machine Learning is increasing each day and this is the case for all industries, including the financial sector. We will explore in our talk, what are the key challenges in the adoption of emerging advanced analytical solutions. What does it take to be ready? The question is not simple especially in light of the ethical dilemma of how such data should or shouldn't be utilized. We will also give our view on what we expect in the future on innovations, jobs and opportunities in advanced analytics.
3:20–3:35 p.m.	<b>Short Coffee Break</b>
3:35–4:25 p.m.	<b>Real-World Use Cases of Deep Learning for Image Processing</b> <b>Vitalii Duk</b> , Lead Data Scientist, EMCL.ai  <b>Talk Abstract</b> Nowadays Deep Learning is a trendy technique that is widely used in data science. In my talk I'll, focus on showcasing real examples where businesses are utilizing Deep Learning for image processing, and how it helps them to grow. During my talk, I'll go through basics of Deep Learning in the beginning, and then transition to the examples, showcasing how Deep Learning is used for image classification to detect fraud, and how it can be utilized to build recommendation engines based on image similarity.
4:25–4:30 p.m.	<b>Closing Remarks</b>