Committee Innovation of PWN (the Dutch Mathematics Platform), Eindhoven University of Technology and TopQuants launch the third College Tour for Professionals on Data Analytics

ANNOUNCEMENT

June 28, 2019

1 Announcement

The Committee Innovation of Platform Wiskunde Nederland (PWN), Eindhoven University of Technology and TopQuants are proud to announce their third College Tour on data analytics for professionals. The college tour consists of a series of lectures on a number of related topics. Each topic is carefully selected to align with current developments and trends in analytics, data science and machine learning. The lectures cover a) a historic overview and b) a deep dive in recent developments. After a lecture you will have a deeper understanding of the topic and a number of practical pointers to explore further on your own.

The lectures are intended for professionals working in business or industry who have a background in science and are interested in current trending topics. It is envisioned that the lectures and the networking afterwards facilitate a healthy dialogue between academia and industry to foster the sharing of knowledge.

The lectures will take place in the evening starting in September. Catering will be provided during walk-in and afterwards participants are invited to join the informal networking part of program. Complementary drinks will be served.

The fee for the program is set at €320,- with everything included. An early bird fee of €280,- applies for registrations before August 15th, 2019. The number of tickets for the complete series of lectures is limited to 40. Separate registration per lecture is also available for €120,-. The number of these tickets is limited to 5 per evening.

2 Program

Details of the program are given below.

Location:	Conference Center High Tech Campus Eindhoven, Bohr room			
	18:45	-	19:30	Walk-in
Schedule:	19:30	-	21:30	Lecture
	21:30	-	23:00	Networking

Scheduled topics:

Day	Date	Topic	Lecturer
Thursday	12-09-2019	Deep Learning - Part I	dr. V. (Vlado) Menkovski (TU/e)
Thursday	19-09-2019	Deep Learning - Part II	dr. V. (Vlado) Menkovski (TU/e)
Thursday	03-10-2019	Anomaly Detection and Monitoring - Part I	Prof. dr. M. (Mykola) Pechenizkiy (TU/e)
Thursday	10-10-2019	Anomaly Detection and Monitoring - Part II	dr. A. (Alessandro) Di Bucchianico (TU/e)

3 Registration

To register, please go to the TopQuants site.

4   Abstracts

Deep Learning Machine Learning is receiving growing attention due to recent successes in long standing problems such as speech recognition, computer vision and natural language processing. These successes are mainly due to a combination of advances in artificial neural networks or deep learning methods, as well as the availability of large dataset and computational resources. This lecture covers the motivation for the underlying technology: When to use Machine Learning and particularly when to use Deep Learning? Why does Deep Learning work so well and what are its drawbacks? We will go over a number of examples that illustrate the modelling process, the design decisions and present a number of successful architectures.

Anomaly Detection and Monitoring Detecting changes in data streams is an important task in several business and industrial applications, e.g., performance monitoring of production processes or equipment, network intrusion in computer networks or fraud detection in financial transactions. Several approaches exist to timely detect changes, but an overview of state-of-the-algorithms is not easy to get because this is being studied in different scientific communities and thus various names are used (changepoint detection, anomaly detection, concept drift etc.). We will provide an overview of state-of-the-art approaches from both the statistical and data mining communities so that business/industrial professionals know where to look for solutions for the challenges they face in detecting changes.

5   Biographies

dr. V. (Vlado) Menkovski

Vlado Menkovski is an Assistant Professor of Data Mining at the Department of Mathematics and Computer Science, Eindhoven University of Technology. His interests lie in Machine Learning and its applications in domains such as Image Analysis, Computational Biology, Applied Physics, and Natural Language Processing. His background includes a tenure at Philips Research as a Research Scientist involving work in Deep Neural Networks (Deep Learning) for Medical Image Analysis in Digital Histopathology and Interventional Radiology and analysis of gene expression data in Genomics. His particular focus is on applications of Deep Learning in natural sciences, and development of methods for efficient learning, model interpretation, and learning from interactions with experts. Vlado Menkovski holds a PhD degree (Cum Laude) from Eindhoven University of Technology and a MSc from Carnegie Mellon University, USA. Vlado Menkovski has co-authored over 45 peer-reviewed publications in various journals and conferences on a range of applications of Machine Learning. Has received multiple awards including best PhD project in 2014 from Eindhoven University of Technology.

dr. A. (Alessandro) Di Bucchianico

Alessandro Di Bucchianico is an Associate Professor in the Department of Mathematics and Computer Science at Eindhoven University of Technology (TU/e). He is specialized in industrial statistics, statistical process control, reliability analyses, statistical computing, statistical software R and rare event simulation. Alessandro's main research interests are Statistical Process Control (SPC), (control charts for specific alternative hypotheses and foundations of SPC in view of big data challenges), Condition Based Maintenance (integration of SPC monitoring procedures with predictive maintenance and data pooling in view of big data challenges), Reliability Theory (correct inference for software reliability models and test plans for reliability testing) and the importance of sampling applications to semiconductor production problems. Alessandro likes to explore the relations between his research topics and address the challenges and opportunities offered by the Big Data revolution.

Prof. dr. M. (Mykola) Pechenizkiy

Mykola Pechenizkiy is Professor of Data Mining at the Department of Mathematics and Computer Science, Eindhoven University of Technology. At the Data Science Center Eindhoven (DCS/e) he leads the Customer Journey interdisciplinary research program aiming at developing techniques for informed and responsible analytics. As principal investigator of several applications-inspired research projects he aims at developing foundations for next generation predictive analytics dealing with anomaly detection and handling concept drifts. Mykola advocates responsible data science, including accountable and transparent machine learning. Over the past decade he has co-authored more than 100 peer-reviewed publications and served on program committees of leading data mining and AI conferences.