Mastercourse: Data Innovation - The business perspective on innovating with data (11/10/2016)

Programme

- 13:00 - 13:15: Registration and coffee
- 13:15 - 13:30: Setting the scene (Sirris)
- 13:30 - 14:30: MANTIS project: Cyber Physical System based Proactive Collaborative Maintenance
    - o Project goals and challenges by Sirris
    - o Fagor use case (press machines) - title to be announced
    - o Philips use case (shaver manufacturing) - title to be announced
- 14:30 - 15:30: Root cause analysis
    - o Barco - Vitriol: let open source data science talk quality and business at Barco Projection

        Vitriol is an open-source based data science framework developed in the Projection division of Barco and used mainly for root cause analysis and investigating business insights, including customer behavior analysis. It is a fully integrated tool that supports and integrates various data sources, allows non-technical users to simply run studies leading email report, and is intended to be fast, cheap, optimized and relatively easy to use. Its name comes from a Latin acronym which can be understood as "you need to dive into the information to improve things."
    - o 3E - Data-driven Fault Detection for Photovoltaic Plants: Data Quality, Common Faults and Data Annotation

        3E is developing the PV Health Scan suite, a family of data services for fault identification and diagnosis of photovoltaic plants. 3E will present how faults can be identified and diagnosed automatically with the example of solar radiation sensors. Particular emphasis is put on the generation of symptoms from data features. For this 3E relies on data from a large though heterogeneous fleet of plants.
    - o Atlas Copco - SMARTLINK & root-cause analysis on compressors worldwide to improve on operational efficiency

        One of the topics Atlas Copco is exploring within the framework of the MANTIS-project, is how to use sensor data from connected compressors for root-cause analysis in the event of a shut-down of the compressor. Currently, Atlas Copco has 60.000+ compressors connected worldwide via its SMARTLINK-solution. There is a wide variety in compressor types, models and generations. This aspect, together with dependency of operating conditions, and the different failure modes make it a challenge to deploy algorithms for root-cause analysis from the lab to an industrial scale.
- 15:30 - 15:50: Coffee break

- 15:50 - 17:10: Failure prediction & Operational optimisation
  - Barco - LightLease Predicting Lamp Behaviour in Digital Cinema
    You are watching a thriller in the cinema. In the middle of an exciting scene a black screen appears. Two weeks later, you are watching a beautiful documentary in the same cinema. The light on the screen is low, your cinema experience is below expectations. Clearly Barco's clients - the cinema exhibitors - would like to avoid this kind of situations and keep their customers happy. Barco decided to give their clients a helping hand: what if we could predict how digital projector lamps will behave in the future? The idea sounds simple: let's turn our massive amount of historical sensor data into business value! This challenging analytical project yielded fascinating technical insights, which Barco will share with you during this presentation.
  - Ilias - Towards Predictive Vehicle Fleet Management
    Ilias will set the scene by identifying a number of specific challenges and characteristics of fleet management in defense. Next, Ilias will discuss the strategies they currently use to optimize their fleet maintenance, based on the data they currently have available, and talk about some early developments in collecting sensor data and generating maintenance requirements from that. Finally, Ilias will highlight the current R&D and the roadmap for their future developments in this domain.
  - Maintenance Partners - Performance optimisation and failure prediction of wind turbines
    Performance optimisation and wind turbine availability are the two main key factors of wind farm project sustainability.
    In this purpose, Maintenance Partners has developed an advanced monitoring system crossing data from various sources (physical and analytical). It allows to detect at an early stage both performance drifts and failure patterns. This talk will present meaningful results of individual wind turbines monitoring and the benchmarking of the entire windfarm.
  - Pepite - Analytics for operational optimisation
    In this presentation Pepite will show how advanced analytics can be used successfully to monitor and improve performance of assets in complex industrial operations. Pepite will show real cases to demonstrate how machine learning can make legacy assets smarter and create new business opportunities, create significant competitive advantage. They will discuss the challenges, the pros and the cons of this hype in asset management.
  - 17:10 - 17:30: Closing remarks (Sirris)
- 17:30 - Networking reception