Introduction to the Business Intelligence, Analytics and Cognitive: Case Studies and Applications (COGS) Minitrack

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The purpose of this mini-track is to introduce case studies of applications of business intelligence, data analytics, cognitive-enabled smart services and digital solutions across industries and societies. Business intelligence and data analytics have continued to make substantial inroads in the operational, managerial and strategic corporate decision-making processes. Recently, the emergence of cognitive computing systems that augment the creativity and productivity of people, and which are trained using artificial intelligence and machine learning algorithms to predict, infer and, up to some extent augment cognitive capabilities, has also extended the range of business intelligence and data analytics solutions on the market.

We will consider results of recent research with focus on the design, analysis, implementation, adoption, and evaluation of real-life cases that provide students and lifelong learners with opportunities to design, develop, and deploy these capabilities as micro-services that solve customer needs, especially those with startup potential.

We will consider a case study reports on lessons learned when customers/users adopt a new information system and interact with the provider of the service, reports that improve our understanding of how BI, Analytics and Cognitive technologies are currently used across industries and societies.

Opening presentation "Comparative Research on Social Risk Reduction by Smart Hazard Monitoring Sensors" by Takashi Washio gives concrete examples of the smart hazard monitoring sensors, categorizes them into three groups and provides quantitative analyses to characterize the expected importance of the three groups of the sensors and their linked smart services in terms of on-line social risk reductions

In the paper "Identification of Human Factors in Aviation Incidents Using a Data Stream Approach" by Donghui Shi, Jozef Zurada and Jian Guan authors apply data streaming analytics to better predict the presence of human factors in aviation incidents.

The paper "Modern Advanced Analytics Platforms and Predictive Models for Stock Price Forecasting: IBM Watson Analytics Case" by Ilias Faizullov, Sergey Yablonsky gives analysis of the ability of modern analytical platforms (using IBM Watson Analytics as an example) to generate predictive models for stock prices forecasting in comparison with traditional analytical econometric platforms and models.

The paper "Overcoming Challenges to Effective Application of IT Research Results: A Framework for Encapsulating the Context and Findings of Research Studies" by Degan Kettles, Uday Kulkarni, Daniel Mazzola, Robert St Louis presents a new framework for encapsulating the context and findings of research studies into a dimensional knowledge base which makes it easy to identify the conflicting results, and to explore the differences in context that might explain the conflicting findings.

In the paper "Towards Open Smart Services Platform" by Hamid Reza Motahari Nezhad and Larisa Schwartz authors present a conceptual architecture for an open services platform which enables a given server provider to offer services to its clients that are a mixture of its own and other services from third party providers in a seamless, integrated and consistent manner.

The last paper "Fast Prototyping of the Internet of Things Solutions with IBM Bluemix" by Aleksey Popov, Andrey Proletarsky, Sergey Belov and Alexander Sorokin introduces a new collaborative framework for fast prototyping of IoT solutions in cloud. Authors investigate how to collaborate smoothly in multiple stakeholders environment in this new rapidly developing area which is of great interest for many industries

We hope you enjoy the papers and their presentation at the conference and we thank the authors for submitting excellent results of their work to make this minitrack successful.

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