

Introduction to the Minitrack on Service Analytics

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The Minitrack on Service Analytics is part of the Decision Analytics and Service Science Track of the 55th Annual Hawaii International Conference on System Sciences (HICSS-55) on January 3-7, 2022.

Service Analytics describe all processes of capturing, processing, and analyzing data taken from a service system – in order to improve, extend, and personalize the service provided and to create new value for both the provider and the customer.

The modern view on services focuses on the co-creation of value between providers and customers—leveraging knowledge, skills, and resources of both partners from an overall system point of view. In most service systems, however, the service providers have no access to data related to the service usage by their customers. On the other hand, an increasing volume of data will be collected either by the users/customers themselves (e.g., through wearables or mobile/smart phones) or by technologies like smart metering in energy services, telematics in automotive and mobility services, RFID in logistics, machine condition sensors in manufacturing, or data capture solutions in healthcare.

Research topics addressed in this year's minitrack and in future installations of the minitrack include the applicability of basic and advanced analytics to different service systems, the state-of-the-art of service analytics methodologies and tool support, and the investigation of benefits resulting from the application of service analytics.

This minitrack will serve as a forum for researchers and practitioners to share progress in the study of these and related themes.

The Service Analytics Minitrack at HICSS is now in its 9th year. Past contributions have addressed service applications in Finance, Retail, Travel and Transport, Manufacturing (Industrial Services), Healthcare, Government, Logistics, Information

Technology (IT Services, Cloud Services), and Telecommunications.

The analytics methods used included Linear Regression, Logistic Regression, Lasso Regression, Random Forrest Regression, Factor Analysis, Clustering, Kernel Density Estimation, Principle Component Analysis, Gaussian Mixture Models, Hidden Markov Models, Stochastic Petri Nets, Discrete Event Simulation, Queueing Models, Collaborative Filtering, Time Series Analysis, Judgmental Forecasting, Text Mining, Sentiment Analysis, Game Theory, Revenue Optimization. and more.

For the HICSS-55 Service Analytics Minitrack, the following research papers have been accepted and will be presented and published in the proceedings:

Comparative Analysis of Classical and Deep Learning-based Natural Language Processing for Prioritizing Customer Complaints, by Jan Blümel and Mohamed Zaki

Fake or Credible? Towards Designing Services to Support Users' Credibility Assessment of News Content, by Enrico Bunde, Niklas Kühn, and Christian Meske

Analyzing the Impact of Complaints on Customer Satisfaction in the Travel Industry, by Youssef Drissi, Markus Ettl, Anna Lisa Gentile, Scott McFaddin, Petar Ristoski, and Wei Sun

Improving Support Ticket Systems Using Machine Learning: A Literature Review, by Simon Fuchs, Clemens Drieschner, and Holger Wittges

A2Log: Attentive Augmented Log Anomaly Detection, by Thorsten Wittkopp, Alexander Acker, Sasho Nedelkoski, Jasmin Bogatinovski, Dominik Scheinert, Wu Fan, and Odej Kao

Process Mining for Advanced Service Analytics - From Process Efficiency to Customer Encounter and Experience, by Sandra Zilker, Emanuel Marx, Matthias Stierle, and Martin Matzner