

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 56th Annual Hawaii International Conference on System Sciences (HICSS-56) on January 3-6, 2023.

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 10th 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-56 Service Analytics Minitrack, the following research papers have been accepted and will be presented and published in the proceedings:

Towards More Convenient Services: A Novel Text Analytics Approach to Understanding Service Inconveniences in Digital Platforms, by Natalia Amat-Lefort and Stuart Barnes

Feeding-Back Error Patterns to Stimulate Self-Reflection versus Automated Debiasing of Judgments, by Nathalie Balla, Thomas Setzer, and Felix Schulz

Context-based pricing for revenue optimization with applications to the airline industry, by Shivaram Subramanian, Markus Ettl, Max Biggs, Wei Sun, and Youssef Drissi

PULL: Reactive Log Anomaly Detection Based On Iterative PU Learning, by Thorsten Wittkopp, Dominik Scheinert, Philipp Wiesner, Alexander Acker, and Odej Kao

How Artificial Intelligence Can Help the Prediction of Treatment Outcomes of Tuberculosis: A Systematic Literature Review, by Maicon Herverton Lino Ferreira da Silva Barros, Sebastiao Rogerio da Silva Neto, Maria Gabriela de Almeida Rodrigues, Vanderson de Souza Sampaio, and Patricia Takako Endo