



Arun Sundararaman

Accenture Advanced Technology Center, India

Healthcare data acceleration: Need for smarter big data solutions to generate insights for clinical decisions

Healthcare continues to be an industry that is data rich, yet information poor, unfortunately. About 80% of healthcare data exists in unstructured format posing challenges to insights generation for timely clinical decisions. Healthcare data is scattered as islands across 4 different data sets; Health administration, clinical/hospital data in EHRs, individual data in PHRs and environmental data in public domain. Consolidating these data sets poses severe challenges and delays. Healthcare Industry has not fully grasped the potential of insights from large data sets using big data technologies. A major challenge in adoption of big data in healthcare is due to lack of practical solutions that help generation of faster insights from internal and external sources. Any solution to address these challenges should comprise three elements viz., rooted in big data technologies, adept at handling complex healthcare data sets (clinical, laboratory, images from medical devices) accelerate generation of insights from large quantities of data. Such a solution needs to balance between speed in processing data while maintaining quality and accuracy to provide dual values of optimized cost of care and highest quality of care. This study introduces one such innovative solution, HAdeaP (US Patent Application No. 16/008, 602), an intelligent big data engine that is designed to act as acceleration engine for insights generation. Salient features of this Solution include capabilities to ingest from a variety of healthcare EDI formats, industry specific meta layer i.e., Accenture's proprietary healthcare domain data model, pre-packaged libraries that provide capability to apply transformation, cleansing, data standardization rules specific to healthcare data, machine learning techniques that derive intelligence from data to generate appropriate insights/KPIs. HAdeaP is rich with Innovative big data design principles (modularized architecture, late binding, externalized rules, meta layer and data science).

Biography

Arun Sundararaman, is currently working as Heads Data and Analytics Technology Practice at Accenture, India. He has completed his PhD in Information Quality Strategy from BITS, Pilani, India. He is a Recipient of the prestigious Ballou-Pazer Information Quality Dissertation Award from MIT-IQ Program for contribution to Information Quality research. He has many international publications to his credit and also serves on Editorial and Review Board of several international technology publications and is widely recognized as a thought leader in Industry and Academia.

arun.sundararaman@accenture.com
arunts@gmail.com

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