

Tracking and Classifying Client Interactions with Personal Coaches

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Abstract : The world health organization (WHO) reports that by 2030 more than 23.7 million deaths annually will be caused by Cardiovascular Diseases (CVDs); with a 2008 economic impact of \$3.76 T. Metabolic syndrome is a disorder of multiple metabolic risk factors strongly indicated in the development of cardiovascular diseases. Guided lifestyle intervention driven by live coaching has been shown to have a positive impact on metabolic risk factors. Individuals' path to improved (decreased) metabolic risk factors are driven by personal motivation and personalized messages delivered by coaches and augmented by technology. Using interactions captured between 400 individuals and 3 coaches over a program period of 500 days, a preliminary model was designed. A novel real time event tracking system was created to track and classify clients based on their genetic profile, baseline questionnaires and usage of a mobile application with live coaching sessions. Classification of clients and coaches was done using a support vector machines application build on Apache Spark, Stanford Natural Language Processing Library (SNLPL) and decision-modeling.

Keywords : guided lifestyle intervention, metabolic risk factors, personal coaching, support vector machines application, Apache Spark, natural language processing

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