Contribution ID: **29** Type: **Presentation**

AnalyzeGenomes.com: A Federated In-Memory Database Platform for Digital Health

Wednesday, October 11, 2017 2:30 PM (30 minutes)

In an increasing number of cases, medical experts discover roots of complex diseases such as cancer with in the human genome. Therefore, analyses of the individual genetic code of each patient are the foundation of the innovative precision medicine. For example, the genetic profile of a tumor sample and the individual life style of a patient can provide insights in to the efficiency of available chemotherapies. However, the acquisition of the genetic profile is very time- consuming, e.g. due to the high number of required process steps, the sheer amount of data, and the use of individual data formats.

The "Analyze Genomes"cloud platform incorporates latest in-memory technology to enable new perspectives for precision medicine and digital health within clinical routine. For the first time, it enables instantaneous analysis of big medical data and their combination with global medical knowledge. As a result, medical experts are able to discover and assess available therapy options much faster to initiate the best choice from the very beginning.

Together with experts from life sciences, such as medical experts, biologists, and geneticists, researcher of the HPI under the management of Dr. Matthieu P. Schapranow have developed the cloud platform „Analyze Genomes"(http://we.analyzegenomes.com/). The software enables experts from various disciplines to perform real-time analysis of big medical data without the need for dedicated IT personnel. Instead of using spreadsheets and static graphs for data exploration, the platform provides tools optimized for digital health. The in-memory technology researched at the chair of HPI founder Prof.
Dr. Hasso Plattner provides the technology foundation for integrating heterogeneous medical data sets, its rapid processing, and real-time data analysis using latest statistical methods.
In the "Medical Knowledge Cockpit", doctors as well as patients obtain together a holistic view on individual genetic variants, biological connections, and links to worldwide available clinical trials.

Track

BDAHM

Author: Dr SCHAPRANOW, Matthieu-P. (Hasso Plattner Institute)

Presenter: Dr SCHAPRANOW, Matthieu-P. (Hasso Plattner Institute)

Session Classification: Use-Cases