Workshop Session on Big Data Analytics for Health Systems

Co-located with

Seventh Workshop on Big Data Benchmarking

http://clds.ucsd.edu/wbdb2015.in

December 14-15, 2015, India Habitat Centre, New Delhi, India

About the Seventh Workshop on Big Data Benchmarking (7th WBDB)

WBDB is a leading international forum for discussing and disseminating the latest trends, challenges, and ideas around Big Data benchmarking and related applications scenarios, in industry, academia and the government.

About the Workshop Session on 'Big Data Analytics for Health Systems'

One of the essential uses of the growing Big Data opportunities is its use in health and wellness. This spans digital data collected by formal healthcare systems such as hospitals and diagnostic labs, information from tertiary care facilities, as well as personal fitness data collected from wearables. The ability to collect, integrate, and analyze these datasets to prescribe preventive and corrective lifestyle and medical interventions is a challenge.

Data is growing and moving faster than administrators of Health Systems can consume it; 80% of health system data is unstructured but is clinically relevant. This data resides in multiple places and levels like individual Electronic Medical Records (EMRs), imaging, diagnostics and genome sequencing systems at labs, physician notes, medical correspondence, insurance claims, CRM systems and finance for health. Further, we have personal fitness devices such as FitBit, iWatch and Smart Plates that are getting popular among consumers in developed countries to get real-time and round-the-clock information of an individual's activities. At the same time, Internet of Things (IoT) is also democratizing tertiary healthcare in developing countries using affordable diagnostics kits and neo-natal monitors plugged into smart phones and the Cloud. Getting access to this valuable data and factoring it into clinical and advanced analytics is critical to improving care and outcomes at individual level and at health system level, along with

incentivizing the right behavior and driving efficiencies is necessary for present Health Systems.

Health Systems across the world are leveraging Big Data technology to capture socio-demographics, economic aspects and health records of patients to get a holistic insight into care coordination, population health management, patient engagement, outreach indicators and outcomes-based reimbursement models. Successfully harnessing big data can unleash the potential to achieve the three critical objectives for health system transformation: Build sustainable Health Systems, Collaborate to improve care and outcomes, Increase access to healthcare.

Global Health Systems are under competitive and legislative pressure to reduce the cost of care, efficiently manage resources and improve patient care. Societal changes, such as the way consumers expect to purchase and receive care; lifestyle choices including the use of social media and mobile technology; the continued rise of chronic diseases; and the push to expand access to primary care are transforming the way healthcare is obtained, delivered and paid for.

The aim of this workshop is to provide a platform to bring together researchers (both academia and from health systems), professionals and practitioners to present, propose and discuss the thoughts, innovations, practices of both theoretical, experimental and practical nature in 'Big Data Analytics for Health Systems'.

Workshop Topics

The workshop invites original research papers in areas related to 'Big Data Analytics for Health Systems' as listed below. Preference will be given to the papers focusing on Big Data benchmark issues related to Health Systems, including identifying reference data sets, reference workloads, performance challenges, and opportunities for application level benchmarks. Topics include but are not limited to:

- Clinical Decision Support Systems
- Wearable Diagnostics
- Sensor Networks for Health Systems
- GIS in Health care

- Device design for Health Systems

- Platforms for health data management, integration and analytics

- Data-driven integration of IoT for Health Systems

- Big Data benchmarking for health systems

Paper Submission and Publication

Prospective authors are invited to submit original research papers (not being considered for publication elsewhere) from 4 to 6 pages in length. Papers must be submitted through the CMT system. Papers should be formatted using the Springer LNCS Proceedings. Unformatted papers and papers beyond the page limit will not be reviewed. At least one author of each accepted paper is required to register at the workshop and present the paper. All submitted papers will be peer-reviewed by at least three program committee members. Accepted and presented papers will appear in the online workshop proceedings. Extended versions of selected original research papers may be invited for potential publication in a special issue of a journal. A summary of the workshop session – including a summarization of relevant papers and workshop discussion related to benchmark issues in 'Big Data Analytics for Health Systems' will be published as a separate paper in the Proceedings of Seventh Workshop on Big Data Benchmarking, by Springer Verlag in their Lecture Notes in Computer Science (LNCS) series. Selected papers from prior workshops on Big Data Benchmarking have been published in *Specifying Big Data Benchmarks*, ISBN 978-3-642-53973-2, and *Advancing Big Data Benchmarks*, ISBN: 978-3-319-10595-6.

Important Dates and Deadlines

Paper Submission	**September 28**, 2015
Paper acceptance notification	October 30, 2015
Final extended version submission	December 31, 2015
Workshop Date	December 15, 2015

Session Program Outline (Half-Day)

Welcome and Introduction	10 minutes
Invited talk	30 minutes
Selected paper presentations	80 minutes
Work-in-progress / Panel Discussion	60 minutes
(common to all co-located sessions)	

Invited Speakers

To be announced.

Workshop Co-Chairs

- **Dr. Suresh Munuswamy**, Indian Institute of Public Health, Hyderabad, India (s.munuswamy@iiphh.org)
- **Dr. Ullas Nambiar**, EMC, Bangalore, India (Ullas.Nambiar@emc.com)
- **Prof. Yogesh Simmhan**, Indian Institute of Science, Bangalore, India (simmhan@serc.iisc.in)

Technical Program Committee

- **List to appear soon**