

University of Notre Dame
Department of Computer Science & Engineering
Presents



Dr. Alex Jaimes
Acesio

Data-Driven Healthcare

Doctors spend on average 14 years training before they are practice. Once they do, on average, they see about 2,000 patients a year. Each patient, in turn produces a trove of data, a very small percentage of which is captured during a doctor's visit. That data, however, is multi-modal, consisting of unstructured text, structured text, etc. In many ways one could argue that a big portion of a doctor's job encompasses making predictions based on data: during those years of training, doctors essentially build mental models that they use to later on make predictions (diagnoses). In spite of a long training period and of seeing so many patients, the numbers seen by any individual practitioner are rather small. In aggregate, however, healthcare produces huge amounts of data. In addition, vast amounts of non-healthcare data is being continuously collected, much of which is directly related to healthcare. Data on the movement of people and goods, for instance, can produce insights into the spread of disease. Environmental data, correlated with disease data, can be used to predict and prevent medical conditions within specific demographic and/or socioeconomic groups. In this talk I will describe how at Acesio we are integrating multiple types of data, at scale, to make healthcare more efficient and to obtain actionable insights at the practitioner, hospital, and macro scale. I'll discuss particular challenges in healthcare, the phenomenal opportunities that exist, and how data will revolutionize medicine.

Alejandro (Alex) Jaimes is CTO & Chief Scientist at Acesio. Acesio focuses on tackling disease incidence at worldwide scale, impacting individuals and entire populations. We use Artificial Intelligence to collect and analyze vast quantities of data to capture emergent disease in ways that have never been done before -- leveraging environmental variables, population movements, sensor data, and the web. Prior to joining Acesio, Alex was CTO at AiCure and prior to that he was Director of Research/Video Product at Yahoo where he led research and contributions to Yahoo's video products, managing teams of scientists and engineers in New York City, Sunnyvale, Bangalore, and Barcelona. His work focuses on Machine Learning, mixing qualitative and quantitative methods to gain insights on user behavior for product innovation. He has published widely in the top-tier conferences (KDD, WWW, RecSys, CVPR, ACM Multimedia, etc), has been a visiting professor (KAIST), and is a frequent speaker at international academic and industry events. He is a scientist and innovator with 15+ years of international experience in research leading to product impact (Yahoo, KAIST, Telefonica, IDIAP-EPFL, Fuji Xerox, IBM, Siemens, and AT&T Bell Labs). He has worked in the USA, Japan, Chile, Switzerland, Spain, and South Korea, and holds a Ph.D. from Columbia University.

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