Statement of Interest
College of Communication and Information

The College of Communication and Information has a number of faculty who are already working in the general areas of health science big data and big data in general. These interests come from the three schools of Information, Communication and Communication Science & Disorders.

Faculty in the School of Information are actively engaged in health data analytics that examines health data to study treatments for the elderly and children. Through the Institute for Digital Information * Scientific Communication the college has engaged in efforts to build large health information repositories and tools for using them in research, creating collaborative online systems to support scientific decision making (Morphbank) and effort to assist museums and universities put millions of biological specimens online.

Many of the faculty members Florida State University’s School of Information are interested and active in health sciences big data. Some have experience within the particular area of health sciences big data; others work in the general areas of big data technology and analytics. These faculty include:

Z. He: analytics and data mining on human health data including clinical, behavioral, and social media data.

C. Hinnant - public policies regarding big data and analytics within public organizations

S. Ho: machine learning of behavioral data and language patterns; behavioral information security and human-computer interaction in health informatics and big data processing.

Y. Kou: data governance; patient experience with big data and big data in patient-centered healthcare

M. Lustria: behavior change interventions; consumer health informatics; persuasive technology; tailored health communication

Our faculty are currently actively involved with FSU’s big data and health sciences efforts, including our Dean L. Dennis who is part of the task force, our Director L. Mon who is attending the education in big data task force meetings, and Assistant Professor Z. He who is involved in many aspects including research and infrastructure areas. The School of Information also has a Social Media lab which has been used in exploring big data connections, and is retrofitting a Health Information Technology lab which we will use as a research lab for involving faculty and students in health data research. Faculty in the School’s Information Institute including C. McClure and M. Mardis have engaged in health big data policy research, and C. Hinnant has partnered with researchers in China in the area of big data in public policy.

The School of Information offers courses in data analytics/data mining and offers certificates in health information technology at the undergraduate and graduate levels, and we have partnered with the new undergraduate interdisciplinary medical sciences degree major program at FSU to offer those students the certificate in health information technology.
Our School’s future interests in the area of health sciences big data include health big data infrastructure, technology, resources and tools, big data governance and policy, big data analytics, and data mining on clinical, behavioral, and social health data, and education in these areas including both health information technology and data carpentry.

The faculty in the School of Communication Science and Disorders educate speech language pathologists and conducts research in the speech, hearing, and the impacts and treatment of conditions that impact communication including autism, strokes, dyslexia and Parkinson’s. A great deal of the data for this field comes in the form of audio and video recordings that need extensive processing to extract usable scientific information.

Many of the faculty members in Communication Science & Disorders are interested in health sciences big data related to communication disorders. These faculty include:

- K. Lansford; E. Madden – neurological communication disorders (e.g., Parkinson’s)
- M. Romano; A. Barton-Hulsey – autism spectrum disorders
- C. Constantino – speech fluency disorders
- K. Farquharson; H. Catts – developmental language disorders (e.g., dyslexia)

Our School’s future interests in the area of health sciences big data include expanding the concepts of personalized medicine to a wide range of communication disorders. We would like to add at least on faculty member who focuses exclusively on the use of health data analytics for communication disorders.

While not strictly health related big data related, the School of Communication is expanding its health and scientific communication efforts and is actively working with faculty on projects in health and behavioral health. There is also an interest in data analytics as a result of the growing use of data in directing advertising and public relations activities.