According to Health IT Analytics website blog by Melanie Meyer, organizations of all types are eager to leverage their big data assets more effectively. In the healthcare industry, where the majority of data is unstructured and all data is difficult to access and analyze, stakeholders are [seeking out staff members](https://healthitanalytics.com/news/healthcare-orgs-struggle-to-meet-ehr-big-data-workforce-needs) who understand how to assemble meaningful stories from fragmented, heterogeneous data. Data scientist positions at health systems were found in departments such as enterprise analytics, clinical strategy, informatics, or population health and at insurance companies in departments named clinical analytics or corporate analytic. In addition to this healthcare is substantially behind many other industries in implementing data science because of the lack the following reason according to Harnessing data science and AI in the healthcare.

* Organization-wide data repositories
* Data governance and security
* Interoperability of data within and across health systems
* Data science capabilities
* Use and repeated reuse of data to improve decision-making and care.

**Data mining**: Gaining insights into medical practice requires a lot of data. Gathering this data takes a tremendous amount of time. The scope of data that medical facilities generate is increasing and that data’s complexity is expanding. This makes the use of ML algorithms a necessity for processing and analyzing information during data mining. The use of data mining in electronic health record EHR revolves around two approaches that have differing scopes:

Finding data: (about the patient and the treatment) In this instance, ML is used to collect pertinent information in the medical history and record of treatment to further aid in decision-making. Patient-centered data mining is utilized in the assessment of varying treatments and outcomes through the study of similar cases from the widened EHR database.

Data extraction: In this case an ML app is used to gather pertinent data based on terms and outcomes across the EHR database. An example would be determining what medication proved to be active for specific ailments and the circumstances under which they were administered. The same tools can be used for exploratory research that are able to reshape available data to meet specific requirements such as examining lipid profiles from test result patterns.

<https://healthitanalytics.com/news/data-scientists-in-high-demand-for-healthcare-providers-payers>

<https://www.wish.org.qa/wp-content/uploads/2018/11/IMPJ6078-WISH-2018-Data-Science-181015.pdf>

great experience that you shared us in the real-world scenario hands on experience develop a digital sticky note interesting to read how medical workers are costumed leaving informal notes each other and being difficult to use new technology and adjust them self as we see every business and industry workers as part of a human behaviors . glad that you shared gave us insight and one perspective of how health care industry lagging to use data science even technology.

Hi Kurt,

Great post to add on the lagging data science in health care industry I found this precise summary

“Some of the Complete Understanding is not Possible in the industry workers and Data science is vast. It utilized in mathematics, statistics as well as computer science. Thus, being perfect in all fields is not a simple task and accepts High Knowledge Data science has a dependency on domain knowledge. Like, who knows computers and must solve statistics. Then Data privacy is the biggest concern

Companies hire a network security administrator for making their data safe and secure. While in data science, personal information is visible to the parent company. Thus, security is big concern, and this makes a drawback in Data Science”

<http://intellspot.com/advantages-disadvantages-data-science/>

beside data security as major concern in lagging data science in health care industry another concern is according to data varsity “data ownership. When patient information was only on paper, patients had to provide written authorization for paper-based information to be shared with other entities. ‘However, with the advent of electronic health records, patient-generated information and even non-structured data available through social media, determining data ownership has become less clear”

[https://www.dataversity.net/7-factors-limiting-the-benefits-of-big-data-in-health-care/#](https://www.dataversity.net/7-factors-limiting-the-benefits-of-big-data-in-health-care/)