**Data Science for Elder Care**

**Supporting View:** Data science will assist in elder care. Artificial Intelligence may play novel role in filling the in-person monitoring gaps due to shortage of direct care workers. This can be achieved by artificial intelligence health monitoring technologies by monitoring, analyzing and alerting family and health care team and reducing the burden on family caregivers and improving the quality of care.

* Smart watches and other wearable devices also those are built into smartphones, already collecting physical activity ( heart rate, sleep cycle, breathing rate, activity level, blood pressure etc), dietary information to provide a snapshot of an older adult’s general lifestyle. AI powered health monitoring technologies build upon these capabilities can recognize, learn, reason, adapt, predict and decide whether alert care providers and family members for emergency care.
* AI-enabled blood pressure or ECG monitors may help to predict various health concerns (e.g., hypertension, atrial fibrillation).
* AI home-health monitoring system continuously detect changes in activity and behavior patterns for early detection of health issues.
* IoT Sensors that are installed in various locations in a person’s home and can track things like physical activity, motion, sound, vitals, or other environmental situations
* AI monitoring programs that continually analyze input data may be able to detect anomalies which may not caught by human eye such as an older person is taking gradually longer time to gain balance while trying to stand up or regaining balance. Upon predicting health decline based on the collected data, the automated analytic system can then decide to alert care providers for safe care based on previously set risk threshold or even behavioral suggestions to the older person.

**Opposing View:** Data science doesn’t really help and it can backfire in the hands of corporate care providers, insurance companies and other intruders who get access personal information being collected. If algorithms are not trained enough, there are high chances of False negative may result in serious consequences.

* Older adults are not always aware of the extent of the monitoring, which can lead to feelings of shame and humiliation
* It continually watches us, and while the data it obtains can be used to help us, it also presents boundless opportunities for misuse.
* Care providers may use algorithmic suggestions to reinforce their own recommendations for action.
* Lack of human connections, social engagement may lead to depressions, increased risk of dementia and poor quality of life.
* Insurance companies who access the data may use them against the patients, e.g. by terminating the coverage or increasing the cost of insurance premiums.