REACTION PAPER

The research methodology was mainly data oriented which included conducting interviews. The first set of interviews led to the second set since it revealed the fact that most of the applications or AI modeling was not provided by the first set of stakeholders such as Hospital directors, Providers, Patients but by consumer health tech industry. The gap in data was filled by the second set of interviews which tried to cover almost all the stakeholders involved in the health sector. This was further aided by Machine Learning experiments and simulation analysis. This might have covered the entire healthcare ecosystem.

The speaker highlighted some of the issues with the current AI model in comparison to the Ideal. It was the expectation that with collection of large amounts of data from a wide variety of stakeholders, the AI model would be deployed at the societal scale and holistic care vision would be fulfilled. The speaker mentions that since the industry is market oriented, the products are more catered to the needs of private insurers and employers and not the end user. However, in the current market there is a rise of application and health monitoring watches etc which caters more to the end users. This might be due to the fact that the AI modelling is being concentrated on Intermediate level and going to a maximum extent of predicting the Behavioral markers such as sleep health, period health, Stress etc. As highlighted by the speaker in one of the graphs which showed that the user will reply on these AI models at all times other than the case where they need clinical attention. As highlighted by the speaker if the final goal was to reach the intervention stage where the AI model will suggest wellness apps, primary healthcare etc, it has not reached perfection yet though certain mental health awareness apps do monitor sleep, send reminders of bedtime etc. It has reached the intervention stage but not in a wholistic manner where there is an integration of the AI model with the providers and the Hospital ecosystem.

Another concern which was mentioned by the speaker was the fragmentation in the patient's healthcare journey. The speaker is of the opinion that each time a user switches to clinical treatment there is a new AI app which might come into play and so on. The blame is not entirely on to the consumer industry as they are always market driven. To prevent this there is a need to create a unified healthcare ecosystem which would include consumer health tech industry, the hospitals and doctors, the providers, the patients, the private insurers and the government. If the hospital is of the opinion that the data collected by wearable electronics is trust worthy to be used for the diagnosis and has enough resources to process the data then there would be no fragmentation in that area.

The speaker also mentions the Doctor-patient tensions being on the rise. The doctors are burned out and hospitals have no capacity to process the data. The cause of the problem being patients wanting more attention from the Doctors to be able to have specialized healthcare by sharing more details of their health which is aided by the AI models. The effect would be not meeting the expectation of the user due to the lack of resources. Again, the path taken by the consumer tech industry is not the only factor in this case. There needs to a wholistic AI model development which will include the Hospitals and the doctors. The burden of integration would be on the physicians and the hospitals as they would lose out on using AI on reducing the work load. Consider the case of the monitored sleep activity and adjusting the dosage accordingly and not waiting for a consult for the same. This would in turn save a lot of time and resources for the hospitals.

REACTION PAPER

Privacy was also one of the concerns raised by the speaker. There is always informed consent before using any data which is shared by the users. It is more of a case of not meeting the expectations from the user point of view. The data which is shared is being used for classification rather than for targeted health needs which is expected when a user shares data. It would be a concern of privacy if the data was being used without the knowledge of the user or against one. In order to solve this case, there is a need to come up with a standard for the Quality of Service being provided and an agreement which would pen down the services which will be provided on sharing any data. Currently it is not scalable or proportional, i.e providing more data does not mean a more personalized experience. That might be the case in the future.

In terms of Fairness and Health Equity, there is probably a long way to go and has mixed opinion as rightly pointed out by the speaker. Minorities willingly share more data to expand their presence in the domain and also expecting personalized healthcare. In terms of Equity it would only be fair ‘to provide more services for those who give data’, but it has not reached that stage yet. Since the data range is small in their case which might lead to case of overfitting if included. There are specialized AI models or transformers which could solve this problem. AI models only for the minorities or the marginalized would help mitigate the concern of lack of Equity.

In terms of social concerns, the speaker pointed out that there is lesser market for public health, recovery care, preventive health and long-term health, so the industry is less motivated to develop AI models or tech in that space. The industry has opened avenues in long term healthcare such as sleep health, mental health apps which are quite popular and in demand. Preventive health is also covered to an extent where the tech gives reminder to complete 10000 steps a day. There can be more if the majority of the stakeholders here such as the government and the end user get involved in creating the necessary demand. Public health is definitely a matter of concern to the government, funding more research in the field would pave the way for scaling AI in digital health and wellness ecosystem.