

Living Long - Open-participation platform that allows patients to access crowdsourced health data on treatments and side effects.

Data Science Researcher / CTO

Contact: Eduardo Bohrer (bohrer@mit.edu)

Problem

Long COVID is expected to impact over 3M Americans this year. These patients face a multitude of symptoms ranging from shortness of breath to heart palpitations resulting from their initial covid infections. Given current shortages in specialty physician appointments and lack of clinical expertise on the condition, long covid patients are left to quarterback their own care: booking appointments, exams, and seeking answers through social media mediums. This healing process is filled with frustration and anxiety for the patient and ultimately results in higher medical costs for the system.

Background

Living Long is aiming to provide long covid patients with a better way to manage through their illness progress. Currently our vision is to create a social health network where patients can share their experiences with patients like them. The power of the platform comes from clustering patients based on the similarity of their symptoms and demographics. So far, we have been able to identify the clinical clusters (respiratory, dermatology, neurological) for patients based on their set of symptoms but given that a patient's symptoms can include multiple clusters, we need to develop a mathematical way to match patients alike.

Solution

Numerous studies have been conducted which characterize the many symptoms that Long COVID patients experience. However, the large number and diversity of symptoms makes clustering a challenge. Our solution is to collect symptom data from many different studies and create a similarity score so that when patients join the platform, they will only see pertinent shared data from patients like them

Role

Your role is to partner with the MD in the team and lead the development of a symptoms similarity score. The similarity score will be the measurement used to match patients with other patients like them. The research will start with long covid as the beachhead test market but will broaden as the company takes on other chronic illnesses. This position will be remunerated based on MIT's policy for part-time employment.

Qualifications

Preferred candidates would have a background in data science and clustering, natural language processing. Most importantly, we are looking for candidates that are highly motivated and resourceful that can make connections within the MIT ecosystem in advancing the companies ability to dissect patient information into actionable insights.

References

<https://www.sciencedirect.com/science/article/pii/S2589537021002996?via%3Dihub>
<https://www.bmj.com/content/370/bmj.m2815.long>