From: Aditya Kendre

To: Tarun Saha

I'm Aditya from Cumberland Valley High School in PA. I am currently researching arrhythmia detection methods in heart sounds (Phonocardiograms). Thus far, I have successfully created a machine learning model that can detect if an abnormality is present within a heart sound recording. With this research, I was selected as an ISEF Finalist, which is the largest and most prestigious Science and Engineering Fair in the US. I am wondering if you would be able to provide some insight into how this technology may be useful in the future and comment on the potential caveats. My project revolves around creating an app that listens to your heart sounds via the microphone and based on the sounds predicts whether an abnormality is present. Currently, I am trying to increase the number of arrhythmias predicted from the app. I have also attached my research paper for more clarity for this year’s project and have also attached last year’s research paper about arrhythmia detection in ECGs. Any advice or guidance regarding the practicality would be greatly appreciated. Thank you!

Best regards,

Aditya