The Experiences

Suhas Bettapalli Nagaraj
Sept. 18, 2020

Wireless Sensor Networks for preventing derailments

My undergraduate thesis was on preventing train derailments in India. During the period of 2013-18, there were 453 railway accidents in India which led to loss of precious lives. Out of these 453 incidents, train derailments accounted for 50% of all cases. I led a group of two other friends where we worked on identifying deformations and help prevent train derailments using wireless sensor networks. Our work was even mentioned by the minister for railways Piyush Goyal in an interview on smarter and safer railways in 2018 (Read the article Point #5). Our methods : DOI: 10.1109/CETIC4.2018.8531029

Speech processing for identifying neurological disorders

I was fortunate to work on identifying neurological disorders such as Amyotrophic Lateral Sclerosis and Parkinson's disease through speech signal processing. I developed an Android app that could be used by neurologists for real time diagnosis.

Related work :

1. DOI:10.21437/Interspeech.2019-1285
2. DOI:10.1109/ICASSP40776.2020.9053682
3. DOI: 10.1109/SPCOM50965.2020.9179503

More recent work

• I recently interned at 3M Health Information Systems to work on improving speech separation techniques for physician-patient conversations.
• For my master's thesis, I'm looking at federated learning methods to identify depression amongst the population.

Takeaway

I have a passion for technology and want to make an impact on the world. I care deeply about changing people's lives for the better. This can be seen in my work on train derailments or the work on neurological disorders. I feel this opportunity at Kleiner-Perkins is the perfect blend of both technology and management and help me to positively contribute to the growth of a new venture and touch the lives of millions.