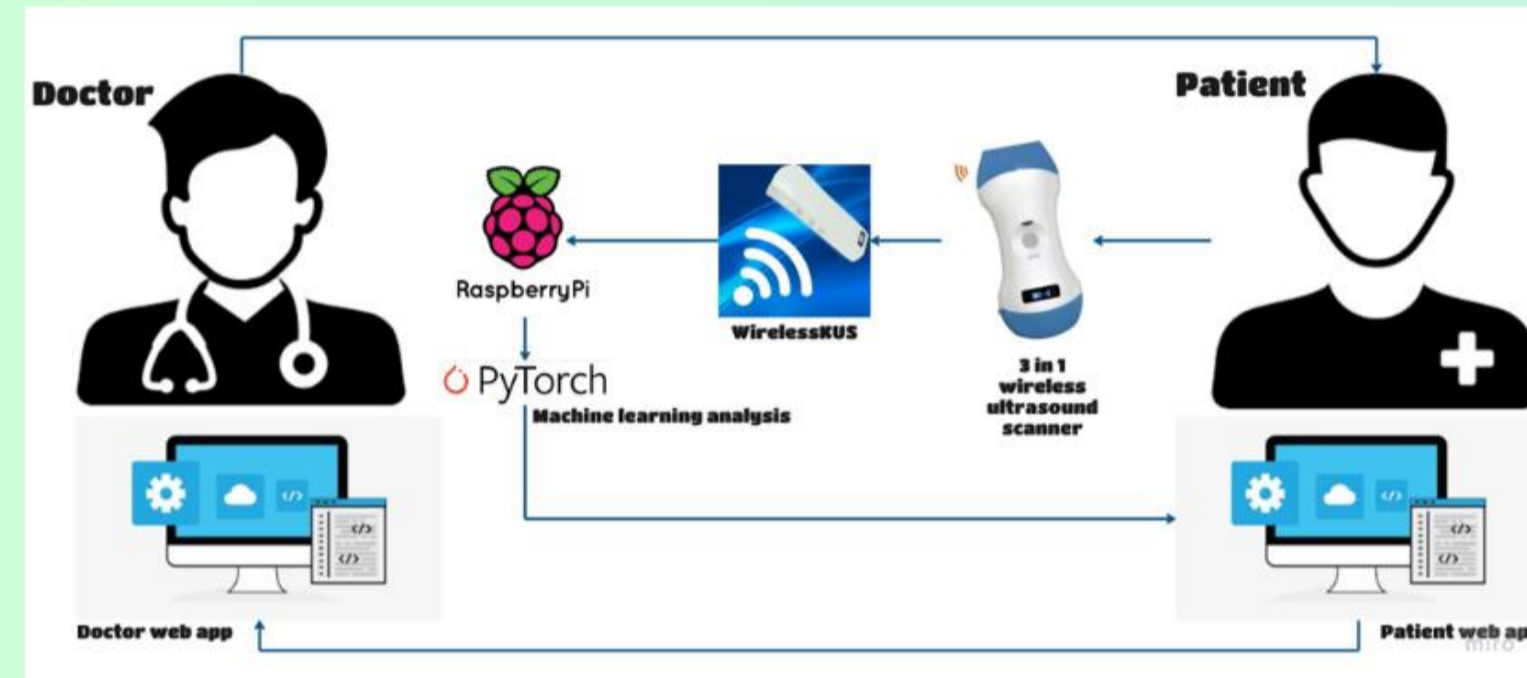


Detecting Cardiovascular Diseases Earlier with a Portable Carotid Ultrasound Device.

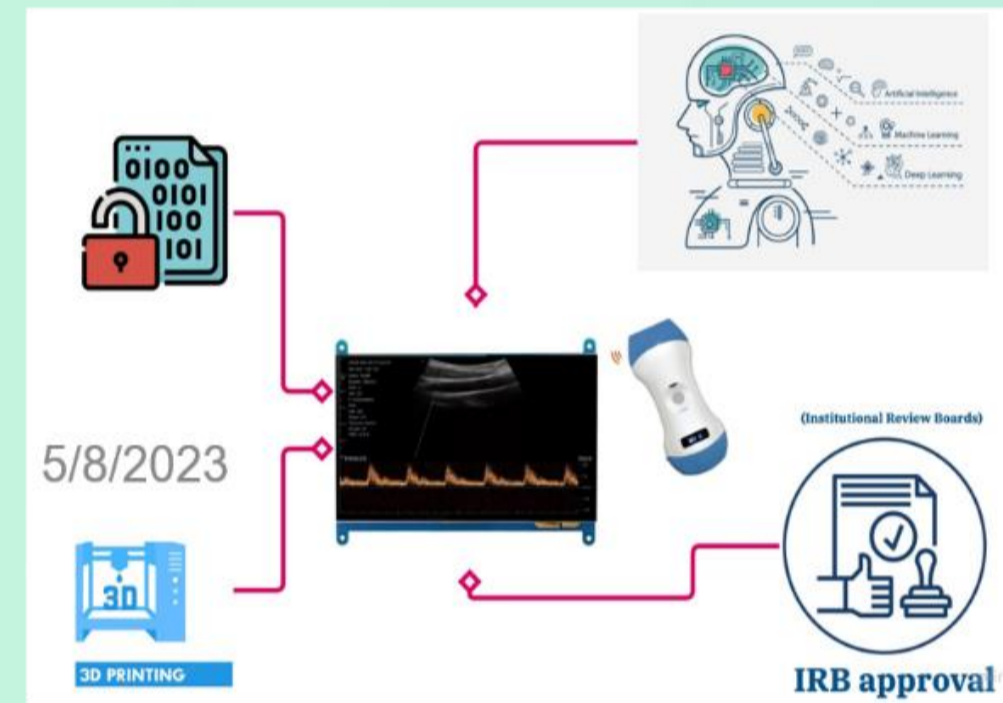
Abstract

Lifestyle trends such as diabetes and high cholesterol will lead to an increase in cardiovascular disease and stroke worldwide. This project will develop a system that obtains Doppler images from individual carotid arteries and transmits them wirelessly to a Raspberry Pi. The Raspberry Pi will use deep learning models to detect carotid stenosis early.

Methodology



Future work



Results & Conclusion

- ✓ High accuracy, low latency, portable, small size, and lightweight.
- ✓ Enable earlier detection of cardiovascular disease.
- ✓ Useful for individuals at high risk for cardiovascular disease who don't exhibit any symptoms.
- ✓ Improved accessibility, cost-effectiveness and ease of use.
- ✓ Design and develop a software for carotid artery IMsegmentation.
- ✓ Design and develop a software for CIMT measurement and grading.



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Welcome to our tech-focused conference! Our poster presentation features an innovative AR experience that you can access by scanning the image below. See the concepts come to life and get a deeper understanding of the topic at hand.

Don't forget to turn up the volume on your device for an explanation. During the networking breaks, feel free to connect with the presenters to discuss the topic further.

Thanks for joining us!



Introduction & significance

The Doppler image of the carotid arteries will be fed to Deep Learning. Moreover, the acquired data can be transmitted to a centralized health portal allowing cardiologists to analyze the data and make real time decisions.

• The goal of this project is to develop:

- ✓ A fast diagnosis and prevention concept.
- ✓ Tool for detecting, monitoring, and preventing this silent killer.
- ✓ Creating a portable handy self-diagnosis tool.
- ✓ Designing affordable device and easy to use.
- ✓ Specify a communication protocol between patients and doctors.

