BRAIN HEALTH MONITORING APPLICATION FOR TRANSCRANIAL DOPPLER SYSTEM

CLIENT OVERVIEW

Our client is a Leading medical devices company focused on brain health. Client had Transcranial Doppler System (TCD) intended for use as an adjunct to the standard clinical practices in the ICU. The TCD is used for measuring and displaying cerebral blood flow velocity within the major conducting arteries and veins of the head and neck

KEY REQUIREMENTS

- Client was in search of a partner to develop an application that interfaces with TCD to analyze cerebral blood flow velocity and provide insights
- Client's existing application was very basic; it provided no analytics or insights and because it ran on a desktop its functionality was limited within the ICU environment
- Client needed a portable solution to treat patients in emergency and give the ultrasound technician easy access to insights

KEY CONTRIBUTIONS

- We developed an application on Windows RT Platform to connect with the Transcranial Doppler System and graphically plot the brain blood flow signals on a tablet computer screen
- The solution plots graphs in Spectrogram and M- mode formats in real time as the exam is conducted on the patient
- Device connectivity feature enables the application to conduct various types of exams to diagnose different types of diseases by attaching Transducer probes on the patient's head
- The ultrasound technician is able to adjust various parameters of the exam (while the exam is running) to observe blood velocity in different blood vessels
- The application is deployed on a tablet computer fitted in a specially designed case along with the TCD machine

KEY BENEFITS

- Portable setup enables the client to conduct exams at patient locations, thus expanding the customer base and gaining competitive advantage

- Audio sync with the real-time graph provides 100% accuracy in exam results

- Our application development process adhered to FDA regulations, smoothing the

TECHNOLOGY STACK

- Windows RT
- XAML
- Microsoft .NET
- AMQP

About Xoriant:

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