

Safe-X

Customer Needs

For this project, the sponsor requires a handheld, portable device that tells if a patient is ready to be extubated. In order to display this information, the device will be able to interface with an electromyograph (EMG).

Number	Need	Source
1.	Must be portable	Sponsor
2.	Must have a display	Sponsor
3.	Must interface with EMG	Sponsor
4.	Must Predict if its safe to extubate patient	Sponsor
5.	Must be user friendly	Sponsor

Number	Need	Interpreted Requirement
1.	1	Light enough to be carried and transported between rooms
2.	2	Either LEDs or LCD display to indicate if its safe to extubate
3.	3	Prototype reads signals from surface EMG as inputs
4.	4	Using the machine learning algorithm, predict if its safe to extubate a patient with minimal error
5.	5	Have a simplistic enough design that is easy for doctors and nurses to use