

MECHTRON 4TB6: Contract

LifeLine

Group 30

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November 18, 2021

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LifeLine is a system that aims to provide four primary functions: quantitative measurements of primary vital signs, live sensor readout, data logging and data exporting. It is intended to be used as a portable device in first-aid situations to monitor vital signs and guide a first-aider to adapt and improve their treatment plan.

We, Group 30, guarantee for our final demonstration to deliver the following

- The system will provide non-invasive monitoring of body temperature, blood pressure, and heart rate.
- The system will help facilitate rapid assessment by providing feedback and visual aid through a GUI (graphical user interface) in order to speed up diagnosis and treatment of a casualty out in the field.
- The system will provide heart rate and body temperature measurements that are more frequent than existing manual methods while retaining sufficient accuracy for the user to perform a medical assessment of the casualty.
- The system will monitor a person's blood pressure without a blood pressure cuff which is used in typical first aid situations.
- The system will give the user the option to save and record data collected during first aid so it can be exported to an external device.
- The device will be portable enough to be carried in a backpack and held in one hand. When operated as intended, the device will cause no harm such as electrical shock or injury to the casualty or user.

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