

Submission Date	2019-09-10
Project Name	Lumi Monitor
Student Names	Kyle Voduris, Harsimran Saini, and Gino Seridon
Project repository	https://github.com/kylev1999/LumiMonitor
SensorsEffectors choices	Light Sensor, Sound Sensor, Motion Sensor
The database will store	Login information, Track the amount of sleep the child has gotten, Time child has been fed, Sound recordings
The mobile device functionality will include	Listen to sound coming from the Lumi, Change the colour of the LED/cycle through colours. Play songs to calm the baby down, Turn on/off Lumi. View data on amount of sleep, feeding, etc. and adjust sensors.
I will be collaborating with the following company/department	Humber College School Of Media Studies and Information Technology
My group in the winter semester will include	Harsimran Saini and Gino Seridon
50 word problem statement	The Lumi Monitor will allow parents to monitor their baby with one device though the convenience of their smartphone. The app will allow parents to check if their baby is awake with the use of motion sensors, adjust the light of the Lumi depending on if the baby is awake or not and can listen if their child is making any noise or crying with the use of the microphone. Songs can also be played from a music playlist to calm the baby down.
100 words of background	A light sensor will detect the light level of a room and dim or increase the brightness of the LED. The LED will be a multicolour or RGB LED, the colour of the LED can be chosen through the app, as well as if the LED should cycle through different colours. The LED brightness can also be changed through the app. The parent can listen to the child though the app using a microphone. The parent can play songs though the app using speakers on the Lumi monitor. The volume can be adjusted on the app. Various data will be stored in the app such as the amount of sleep the child has had, times that the child has been fed, etc.
Current product APA citation	Ehara, R. (2015, January 6). Listnr: Your Listening Assistant. Retrieved from https://www.kickstarter.com/projects/797220287/listnr-your-listening-assistant
Existing research IEEE paper APA citation	M. P. Joshi and D. C. Mehetre, "IoT Based Smart Cradle System with an Android App for Baby Monitoring," 2017 International Conference on Computing, Communication, Control and Automation (ICCUBE), Pune, 2017, pp. 1-4. doi: 10.1109/ICCUBE.2017.8463676 URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8463676&isnumber=8463637
Brief description of planned purchases	RGB LED(s), microphone, speaker, motion sensor, light sensor, Raspberry Pi 4 (broadcom development platform), Arduino
Solution description	The Lumi Monitor will make parenting easier. The Lumi Monitor will allow parents to monitor their baby's well being with one device through an app. The app will allow various adjustments the Lumi monitor, they can listen and monitor if the child is awake, and play music to relax the baby. The app will also show analytics of the amount of time the baby has slept as well as a tracker of when the baby has been fed.