RET Project: ML for Newborn Medical Sensors

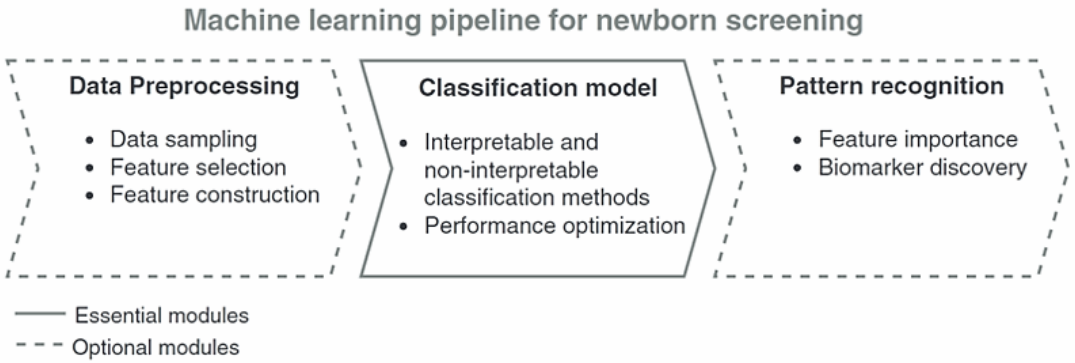
Raquel Diaz[1], Daniel Gulick PhD[2], Dr. Jennifer Blain Christen[2]
[1] Trevor Brown HS [2] School of ECEE at Arizona State University,

Motivation

- Early Detection of potential medical diseases in newborns.
- Time frame is within hours of birth.
- Detect serious health conditions such as hypoxia or cerebral palsy.

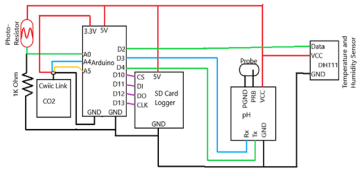
Current Status

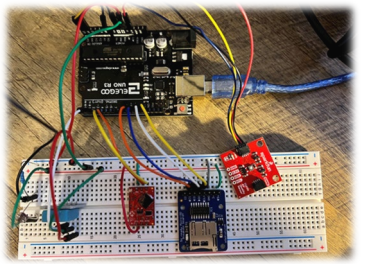
- Current Medical Baby Boot measures O2 and Heart rate.
- Build on previous ML studies performed on blood gas analysis of neonates during pregnancy complications.



Our Research

- Apply ML algorithms to predict CO_2, pH, Glucose, and O_2 Biometric Data.
- Simulating Sensor Detection using Arduino Uno Circuit Board for plants.
- Identify key features.
- Use ML to create an optimal linear regression algorithm.





Ira A. Fulton Schools of Engineering
ARIZONA STATE UNIVERSITY

Sensor Signal and Information Processing Center
http://sensip.asu.edu

RET Site sponsored by
NSF Award 1953745