

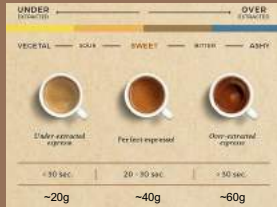


ESPRESSO OVERFLOW

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Background

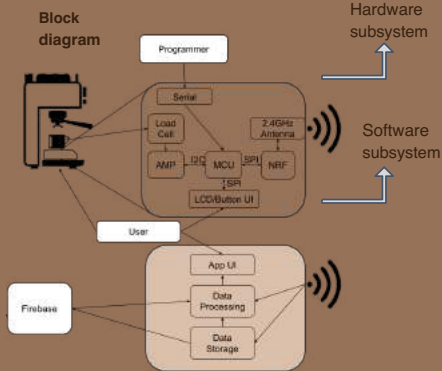


The taste of espresso is dependent on well known variables: pressure, heat, and surface area. Pressure and heat are fixed by a high quality espresso machine, surface area is tuned by a grinder. The taste can then be quantified by looking at the weight vs time of the pull. The current solution is measuring the weight with a kitchen scale before and after as well as timing with a phone stopwatch. This data is then manually recorded to inform the next pull.

Product Pitch

The taste of espresso can be quantified by looking at the weight vs time of the pull. This project provides that information with a scale and iOS or Android application that records and displays the relevant information. Our device is able to record and display the data within five seconds of a pull. It also provides users with the ability to upload their custom logs.

Architecture

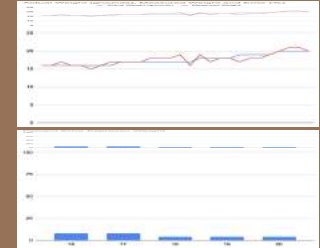


Description



A functional scale with Bluetooth connectivity to transfer live weight data to the overhead application

Evaluation



The device quality was verified using a commercial scale to cross reference the weights of coffee grounds

FX292X-100A-0025-L NEXT-SHINE Load Cell

Primary Trade Offs

Load Cell

<ul style="list-style-type: none"> • STM32F423CHU6 • 12.5kg ± 1% • H = 5mm • D=19mm 	<p>Resolution →</p> <ul style="list-style-type: none"> • 500g ± 2g • 47mmx10mmx6mm
<ul style="list-style-type: none"> • SPI, I²C, GPIO, JTAG • Not Available 	<p>Availability →</p> <ul style="list-style-type: none"> • SPI, I²C, GPIO, Serial • Available