

Real time display of energy and water usage

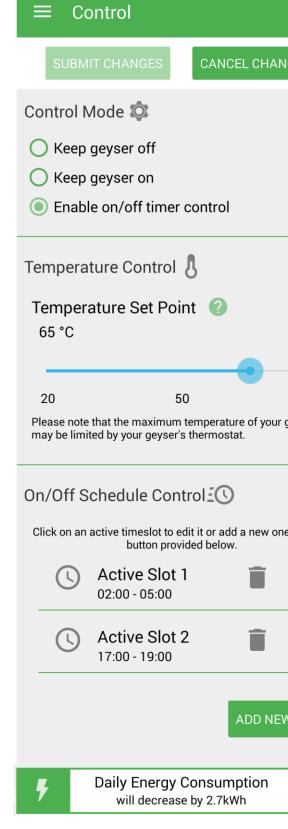
Daily and weekly historical consumption data



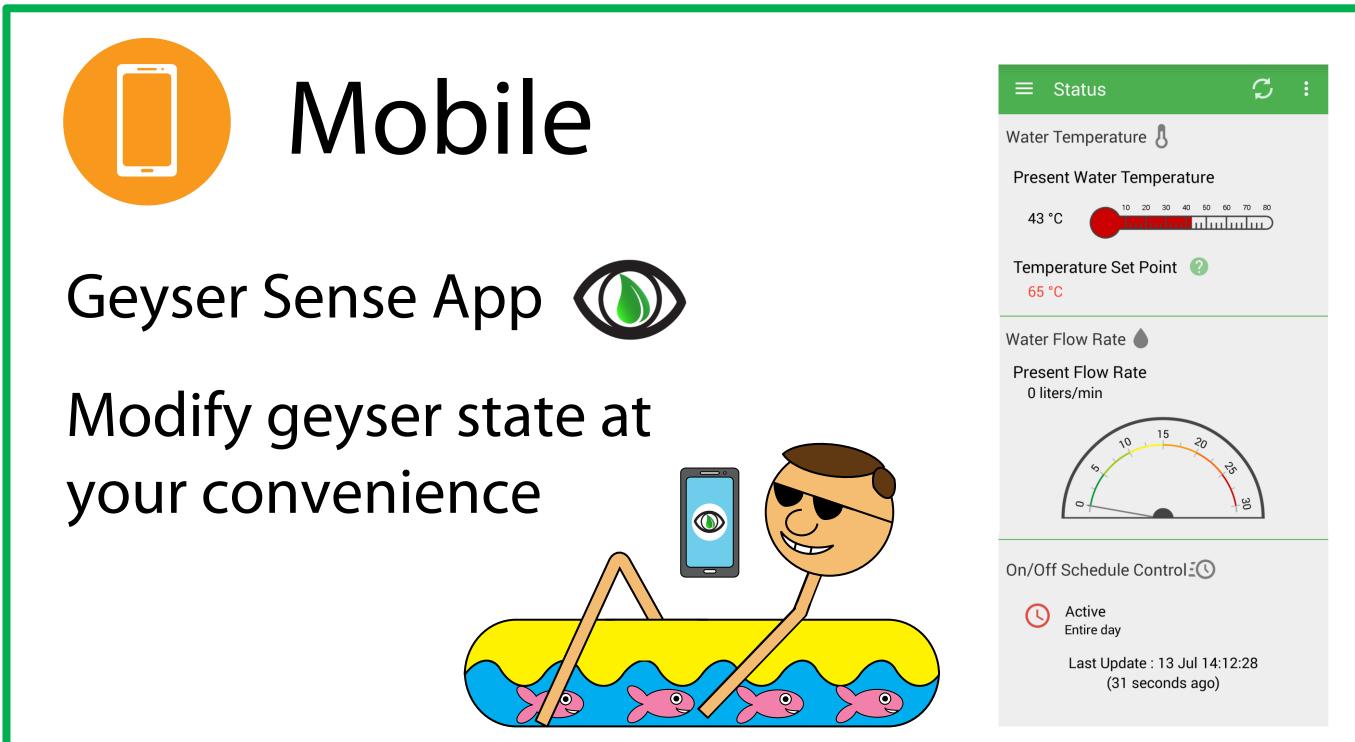
Set the water to a comfortable temperature

Save energy by implementing an on/off schedule

Instantaneous feedback on impact of control decisions



Energy Usage



# Intelligent Geyser System

$\mathcal{C}$ :
Ψ,
nergy Usage
0 5 10 15 20 25 30
Energy Cost
Vater Usage
0 100 200 300 400 500 600
Vater Cost
odate : 01 May 11:07:45 (21 seconds ago)
I <b>:</b>
ANGES CANCEL CHANGES
ţŎ:
er off er on
off timer control
Control 🖁
Set Point 🕜
50 80 e maximum temperature of your geyser
50 80
50 80 e maximum temperature of your geyser
50 80 e maximum temperature of your geyser our geyser's thermostat.
50 80 e maximum temperature of your geyser our geyser's thermostat. ule Control EC
50 80 e maximum temperature of your geyser our geyser's thermostat. ule Control EC imeslot to edit it or add a new one with the button provided below. ve Slot 1



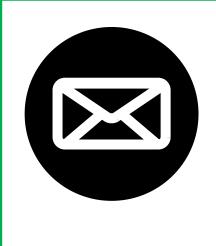


Four temperature measurements

Hot and cold water flow

Power measurement

Burst detection with failover lockdown



### **Contact Details**

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Web: http://mtn.sun.ac.za/intelligent-geyser-system/





**UNIVERSITY** 







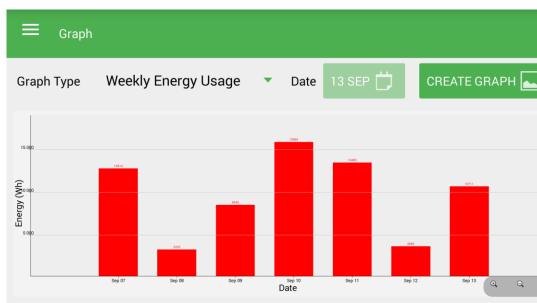


## Intelligence

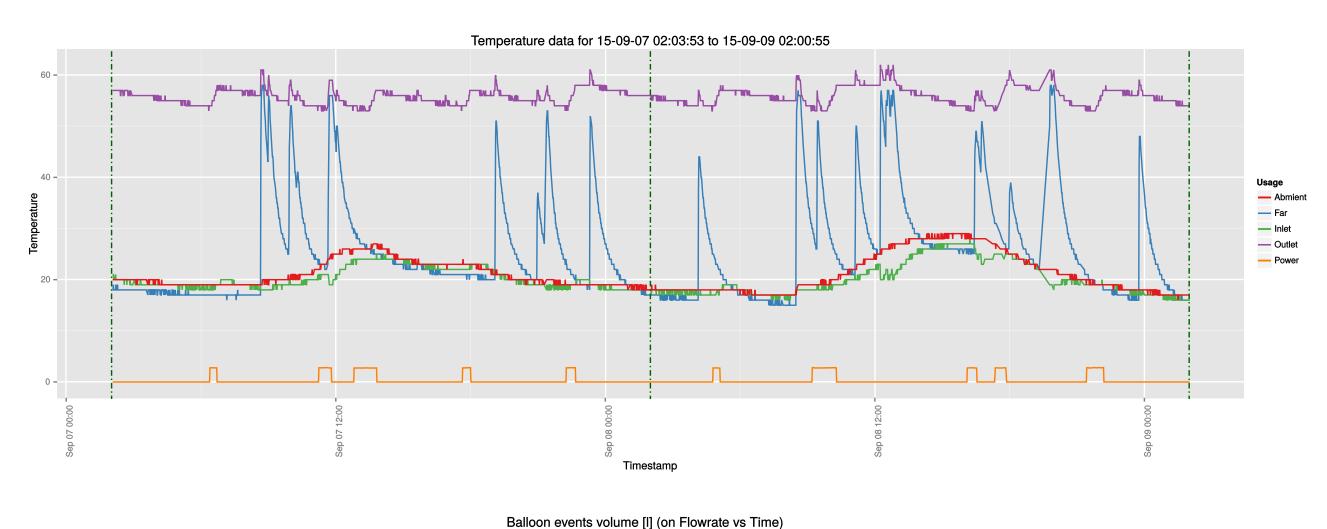
Cost analysis of individual events

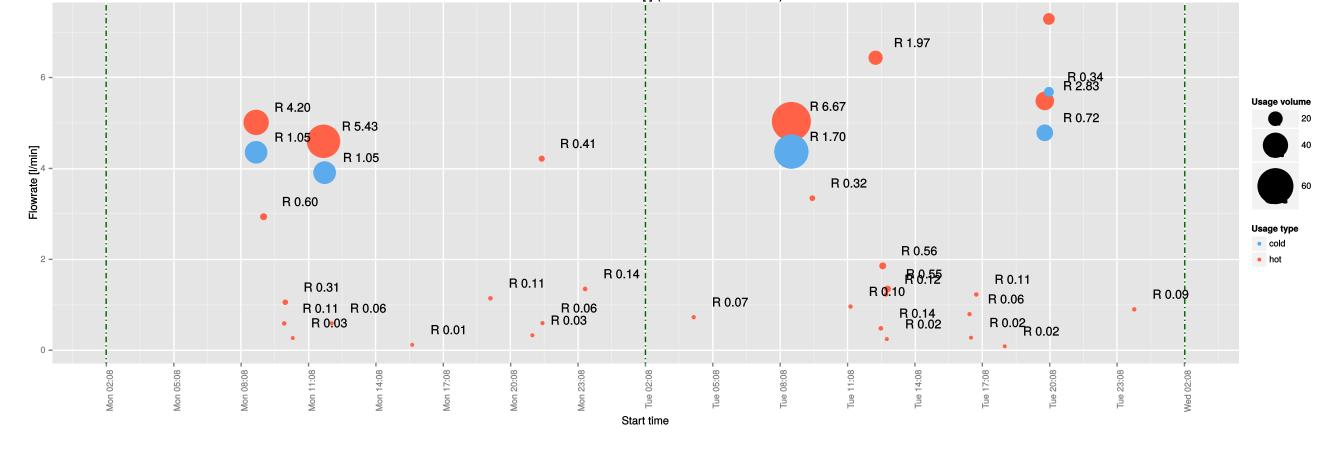
Automatic leakage detection and valve shutoff

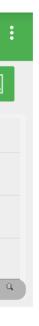
Determine usage profile through event detection



Daily Geyser Usage Report						
Start time	Duration	Litres	kWh	Water Cost	Energy Cost	<b>Total Cost</b>
06:53	3 min	16	0.57	R 0.48	R 0.74	R 1.22
07:09	5 min	25.5	0.79	R 0.77	R 1.03	R 1.79
07:51	10 min	56.5	1.61	R 1.70	R 2.09	R 3.79
13:28	10 min	12	0.30	R 0.36	R 0.39	R 0.75
19:50	4 min	15.5	0.34	R 0.47	R 0.44	R 0.91
TOTAL		125.5	3.61	R 3.77	R 4.69	R 8.46







≡ Ор	timise		:				
Please select a day that most accurately represents your typical daily usage.							
Date	10 DEC 📛	ANALYSE 🕥					
Energy Usag	e Without Optimi	sation : 6.166 kWł	า				
Energy Usage With Optimisation : 3.466 kWh							
Usage Events							
Event 1		la a lu da	2 🗖				
Time : 05:5		Include	? <u>~</u>				
Duration : 4	4 minutes						
<b>Event 2</b> Time : 06:2	7	Include	? 🔽				
Duration : 4			_				
Event 3			_				
Time : 11:0	17	Include	?				
Duration : 4	4 minutes						
Event 4		Include	2 🗖				
Time : 12:4 Duration : 4	-	include					
Event 5	4 minutes						
Time : 13:2	6	Include	?				
	Duration : 11 minutes						
Event 6							
Time : 16:57 Include?							
Duration : 5 minutes							
Event 7		Include	2 🔽				
Time : 19:1		include					
Duration : 5 minutes							
	RECALCU						
Optimised On/Off Schedule ⊘							
	Active Slot 1						
	Active Time : 03:	45 - 06:15					
	Active Slot 2						
Active Time : 17:15 - 19:15							
IMPLEMENT SETTINGS							
E.	Daily Energy C	onsumption	MORE				
	will decrease	by 1.5kWh					