

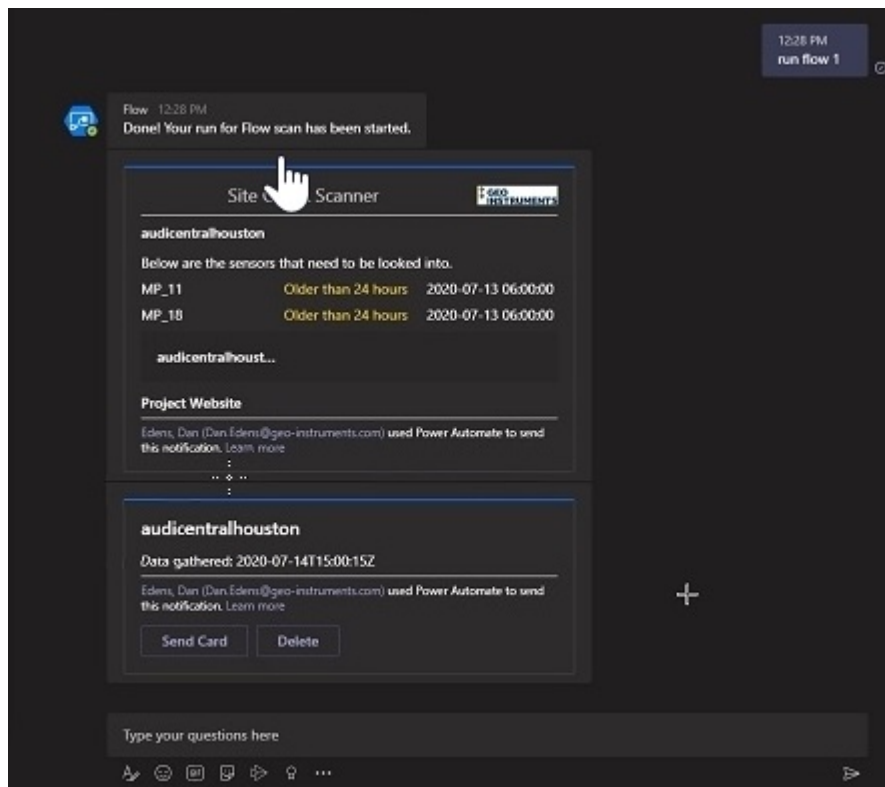
# Apps Designed and Deployed

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## 1. Sitecheck Scanner

- A CLI for end-to-end testing Client websites.
- Generates Visual tour of multiple Geotechnical monitoring platforms, used to assists Geo-Instrument's field technicians with Issue Visability
- Navigates through Planviews and alerts the User to changes in sensor status, missed readings and setup errors.
- Support for Microsoft Team's Adaptive Cards.
- SQL database is monitored, alerting on any sensors missing for 22 hours, and reporting to an MQTT broker.
- Decentralized database access, and reduced Human error in Issue visability.

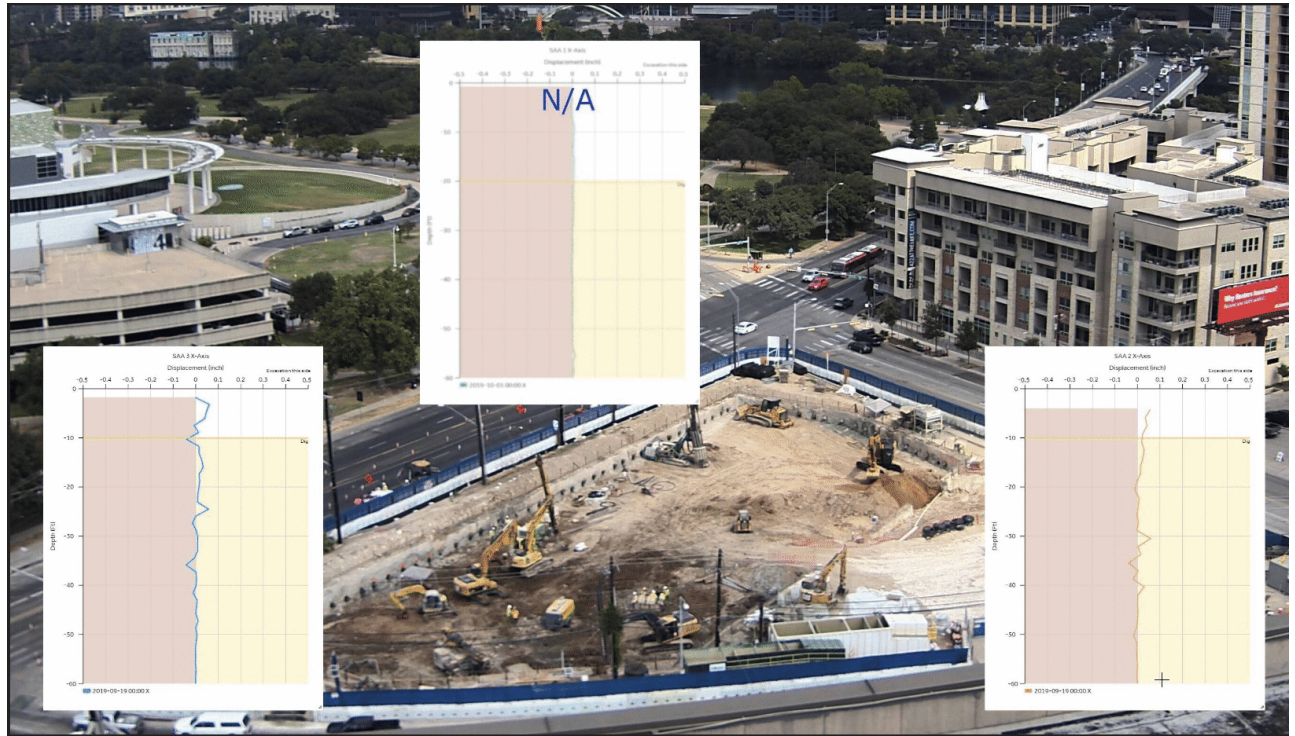
[Demonstration Video](#) --- [Check it out on Github](#) --- [Install via Pip](#)



## 2. Timelapse\_factory

- NodeJS Web scrapper for pulling plots of data graphed on our Quickview platform.
- Used to overlay data from sensors installed in the Diaphragm wall onto Jobsite Camera footage.

[Demo On Youtube](#)



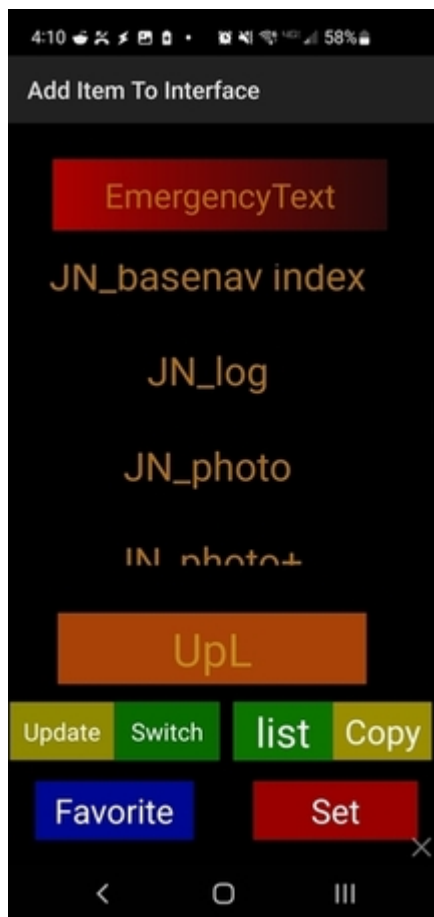
## Tools for the Field

### 1. Interface Panel -

[Download on Taskernet](#)

- GUI for assigning scripts to Mobile device triggers such as Shake, Hardware buttons, NFC tags, and Voice commands.
- Used to assist in safely operating testing equipment in Industrial environments.
- Able to detect current job by closest address, and uses this for sorting data.

- "SOS button" mode to alert On-Site Safety Manager

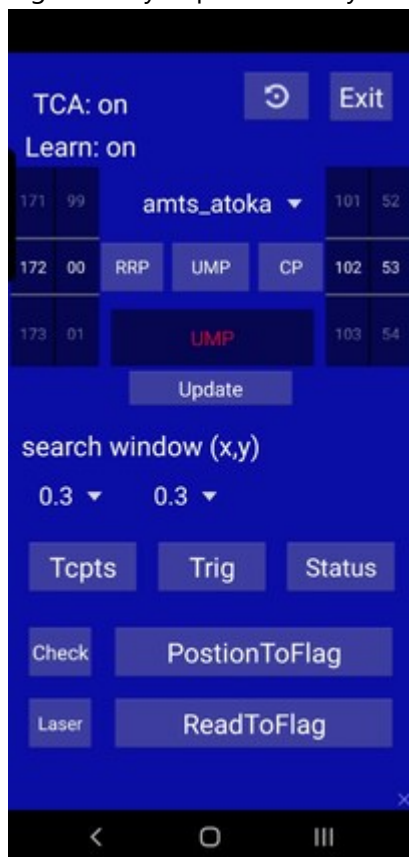


## 2. LnetFieldApp

Frontend:

- Android App for controlling [Topcon](#) total stations.
- Internal replacement for Campbell Scientific's [Loggerlink](#) app.

- Significantly improves ability to locate survey points.



- Backend:
  - Lightweight and scalable python script that pipes MQTT topics into [Xargs](#).
  - Non-blocking control of several Units through the [Loggernet CLI](#), [Corascript](#).

- Server utilizes Python, Xargs, and Mosquitto.

remote / 20210812.5

**Primary run**

```
--
20 HzAxis set to: 267
21
22 VAxis set to: 265
23
24 point_name set to: MP5
25
26 HzAxis set to: 7
27
28 VAxis set to: 272
29
30 search_windowX set to: 0.5
31
32 search_windowY set to: 2
33 Command learnmode_on flag to: true
34 host = localhost
35 user = admin
36 device = deskIP
37 coraecho = on
38 CoraScript 1, 24, 04
39 connect localhost --name="admin" --password="";
40 +connect,"coralib3.dll version 2, 02, 15"
41 set-variable deskIP Public LearnMode {} true;
42 +set-variable,The variable was set
43 Command aim flag to: True
44
45 host = localhost
46 user = admin
47 device = deskIP
48 coraecho = on
49 HzAxis = 267
50 VAxis = 265
51 point_name = MP5
52 CoraScript 1, 24, 04
53 connect localhost --name="admin" --password="";
54 +connect,"coralib3.dll version 2, 02, 15"
55 set-variable deskIP Public NewPointHz {} 267;
56 +set-variable,The variable was set
57 set-variable deskIP Public NewPointV {} 265;
```

Scanning for tool capabilities.  
Connecting to the server.  
2021-08-12 14:33:44: Listening for Jobs  
2021-08-12 14:33:44: Running job: Runner  
Error reported in diagnostic logs. Please examine the log for more details.  
- C:\Users\Dan.Edens\devopsagent\diagAgent-20210812-143336-etc.log  
2021-08-12 15:33:54: Job Runner completed with result: Canceled  
2021-08-12 15:54:17: Running job: Runner

SM-G970U

10:56 80%

**LearnMode**

on ☐ Exit

MP UMP CP

266 278

267 **MP5** 279

268 Send 280

0.3 0.3

send window (x,y)

Flip

PostionToFlag

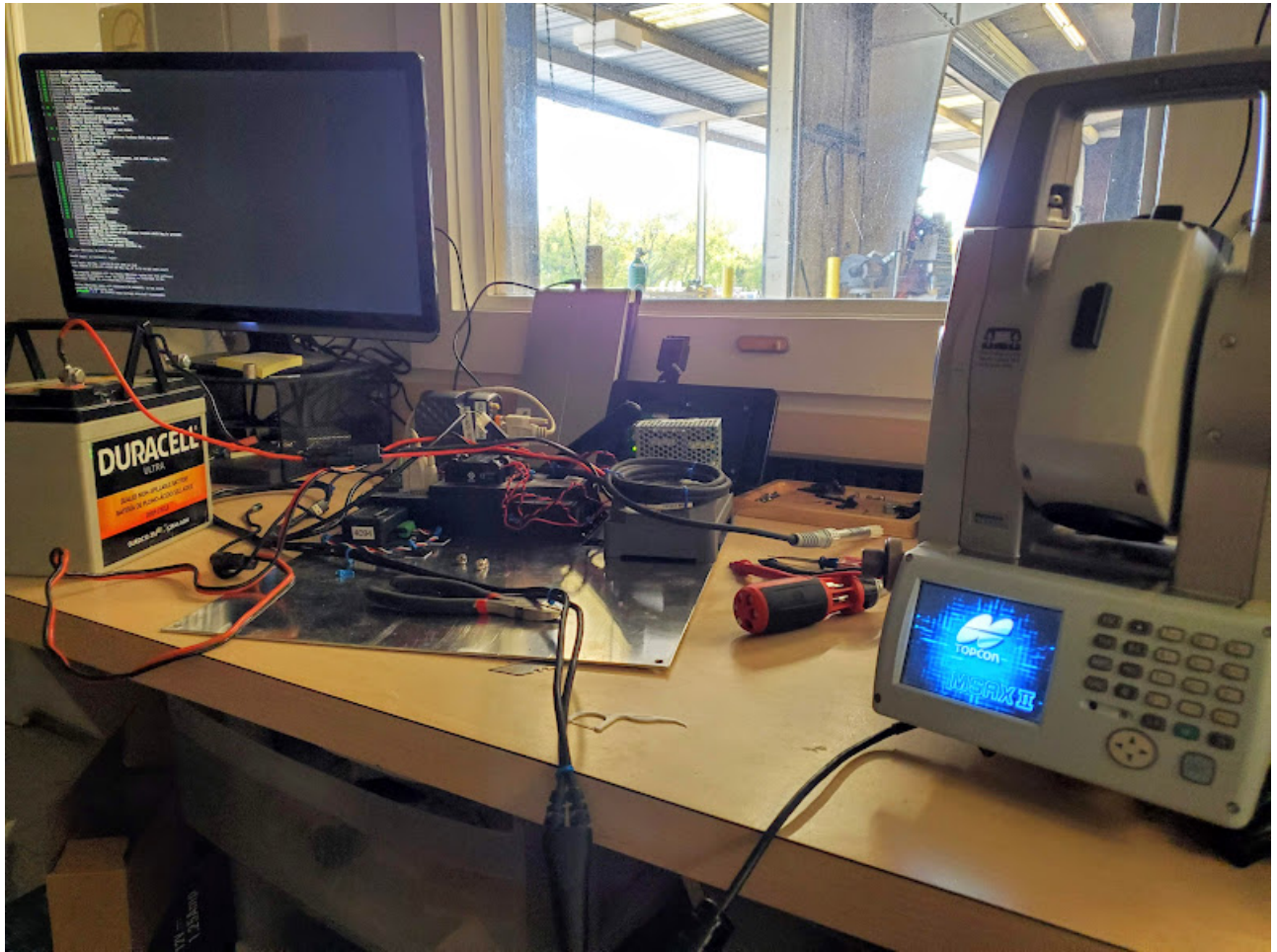
ReadToFlag

## Tools for the Shop

### 1. AMTSworkshop

*Began as migration of 20 years worth of Campbell Scientific Datalogger programs into Git.*

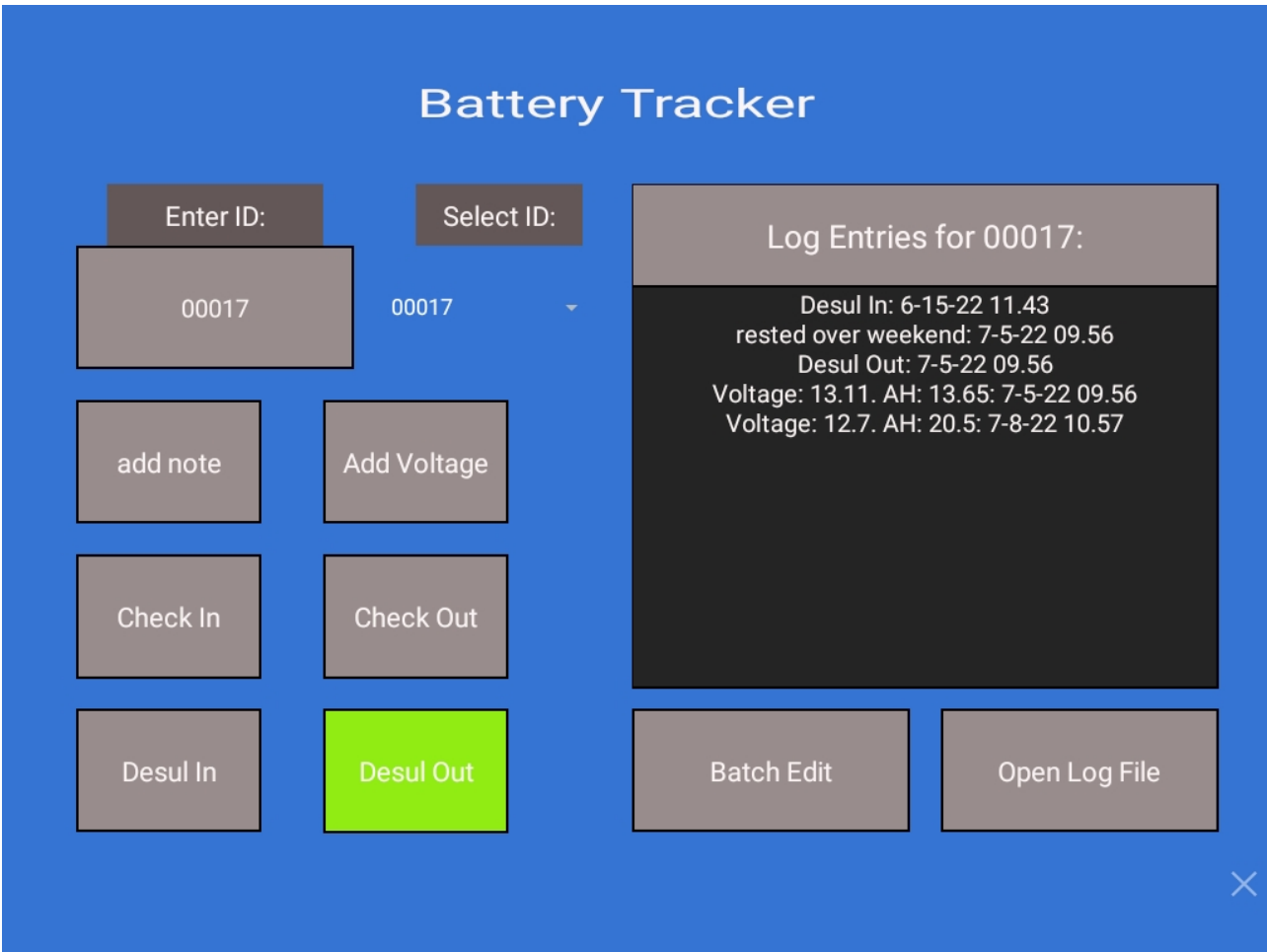




- Worked on an R&D project for a new type of Monitoring prism.
- Azure DevOps pipelines for testing each commit on live lab equipment
- Designed to handle rolling out changes slowly due to certain project specs requiring legacy versions on remote data loggers.

## 2. Geo Battery Bot

[Check it out on Github](#)



Mobile app for tracking inventory of Geo-instrument's fleet of 110ah AGM batteries. This is used to manage the [desulfating](#) schedule.

- I created a QRcode generator which publishes a number and status to the (Join API) [<https://joaoapps.com/join/api/>].
  - A tablet located in the Geo-Instrument's Shop acts as the server.
  - Created an Andriod app as GUI and backend to log unit events.
  - Stickers are generated in a given range of serial numbers by the [python script: QR-generator.py](#)
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## Project Portfolio:

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### 1. [MSE Wall Repair \(Project Spotlight\)](#)

- Apr 2021 - Oct 2021
- Planned and executed a Monitoring plan for a collapsed MSE wall in Fort Worth, Tx.
- Deployed Tiltmeters and Crack monitoring equipment to monitor for movement during wall repair.
- Built and Maintained Client website displaying Tiltmeter and AMTS Data.

### 2. [Lock and Dam \(Project Spotlight\)](#)

- Nov 2018 - Feb 2019
- Emergency Repair of an Army Corps of Engineers' Lock and Dam.
- Provided Equipment troubleshooting and Live Data monitoring for the repair team.
- Developed a Grout logging app for Crew working in heavy storming.
- Deployed Piezometers and Tiltmeters 40 feet underwater on the Dam's slab.

### 3. [Capitol Complex Excavation](#)

- Mar 2018 - Jul 2022
- Excavation monitoring in downtown Austin, Tx.
- Installed AMTS systems, Tiltmeters, Automated Inclometers, and Vibration Monitors.

### 4. [SH288 WSE wall failure \(News Article on Emergency\)](#)

- Apr 2021 - Oct 2021
- Provided the client with SAA and Piezometer data during operations.
- These were used to monitor for additional settlement and the height of the water table during Emergency repairs.

### 5. [Fuji \(Project News article\)](#)

- Aug 2021 - Apr 2022
- Tunneling Monitoring below 14 lines of Railroad.
- Provided the client settlement data during tunnelling.

### 6. [Pittman Hotel \(Project News article\)](#)

- Aug 2018 - Apr 2019
- Monitoring underpinning activities during the preservation project of The Pittman Hotel in Dallas, Tx
- Provided the client with a website for viewing Settlement and tilt data.



#### 7. [425 Riverside \(Project News article\)](#)

- May 2019 - Jun 2020
- Diaphragm wall project in Downtown Austin, Tx
- Data used to verify design loads during construction, resulting in the elimination of a row of anchors.

#### 8. [Atoka Pipeline Repair \(Project News article\)](#)

- Jul 2019 - Jan 2022
- Tunneling project to relocate a Water pipeline underground
- Installed 2 AMTS systems to monitor the active water pipeline during blasting activities

#### 9. [Government Center Parking Garage - MBTA Greenline LT\(Project News article\)](#)

- May 2022
- Load Test performed on supports affected by the Government Center Garage collapse in Boston, MA.
- Deployed MPBX Laser systems and String potentiometer during testing.