# Tools for Project managment

1. Sitecheck Scanner
   * A CLI for end-to-end testing Client websites.
   * Generates Visual tour of multiple Geotechincal monitoring platforms, used to assists Geo-Instrument’s field technicians with Issue Visablity
   * 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 missing sensors and reporting via MQTT broker.
   * Decentralized database access, and reduced Human error in Issue visablity.  
     ### [Demo on Youtube](https://www.youtube.com/watch?v=HExwe__eeJU) — [Check it out on Github](https://github.com/DanEdens/sitecheck) — [Install via Pip](https://pypi.org/project/sitecheck/0.8.1.1/)

* [Example of Output](http://www.youtube.com/watch?v=HExwe__eeJU)

1. Timelapse Factory
   * Web scrapper for manipulating data displayed on our Quickview platform.
   * Used to overlay data plots onto Jobsite Camera footage.  
     ### [Demo On Youtube](https://www.youtube.com/watch?v=cgKvyPWVw6E)

## [Example Image](https://www.youtube.com/watch?v=cgKvyPWVw6E)

# Tools for the Field

1. Interface Panel -  
   [Download on Taskernet](https://taskernet.com/shares/?user=AS35m8mBhJAezDTr0Lio7dopdLiBaKgozAOxoCXM7Mh8sS5hSvSst1kEMf5%2FJeJveB%2BsvU8%3D&id=Project%3AInterface)
   * 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  
     ExampleImage
2. LnetFieldApp  
   Frontend:
   * Andriod App for controling [Topcon](https://www.topconpositioning.com/total-stations/robotic-total-stations/ms-axii) total stations.
   * Internal replacement for Campbell Scientic’s [Loggerlink](https://play.google.com/store/apps/details?id=com.campbellsci.loggerlink&hl=en_US&gl=US) app.
   * Significantly improves ability to locate survey points.  
     LnetExample

* Backend:
  + Lightweight and scalable python script that pipes MQTT topics into [Xargs](https://www.man7.org/linux/man-pages/man1/xargs.1.html).
  + Non-blocking control of several Units through the [Loggernet CLI, Corascript](https://www.campbellsci.com/loggernet).
  + Server utilizes Python, Xargs, and Mosquitto.  
    LnetExample —

## Tools for the Shop

1. AMTSworkshop  
   *Began as migration of 20 years worth of Campbell Scientific Datalogger programs into Git.*  
   AMTScover
   * 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](https://github.com/DanEdens/GeoBatteryBot_public)  
   Batterybotexample  
   Batterybotexample  
   Mobile app for tracking inventory of Geo-instrument’s fleet of 110ah AGM batteries.  
   This is used to manage the [desulfating](https://www.upsbatterycenter.com/blog/battery-desulfation/) 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](https://github.com/DanEdens/GeoBatteryBot_public/blob/master/qr-generator.py)

# Project Portfolio:

1. [MSE Wall Repair (Project Spotlight)](https://www.geo-instruments.com/mse-wall-repair/)
   * 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)](http://www.massman.net/project/columbia-lock-dam-emergency-repairs)
   * 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](https://www.tfc-ccp.org/)
   * Mar 2018 - Jul 2022
   * Excavation monitoring in downtown Austin, Tx.
   * Installed AMTS systems, Tiltmeters, Automated Inclinometers, and Vibration Monitors.
4. [SH288 WSE wall failure (News Article on Emergency)](https://abc13.com/sh-288-pavement-failure-safety-purposes-structural-damage/10527940/)
   * 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)](https://www.nola.com/news/business/article_a9e05f91-a734-5bd1-8d05-587258f6a3c0.html)
   * Aug 2021 - Apr 2022
   * Tunneling Monitoring below 14 lines of Railroad.
   * Provided the client settlement data during tunnelling.
6. [Pittman Hotel (Project News article)](https://www.dmagazine.com/commercial-real-estate/2020/06/first-look-the-kimpton-pittman-hotel-in-deep-ellum/)
   * 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)](https://www.realcomm.com/news/1045/1/river-south-austin-introducing-the-smart-building)
   * 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)](https://tunnelingonline.com/crossing-the-canadian-river/?oly_enc_id=9796A6381467B9S)
   * 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)](https://www.wcvb.com/article/mbta-green-line-service-suspended-government-center-garage/40399135)
   * 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.