**Frédéric Morel**

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**PROJECTS**

**Regional Energy & Water Dashboard** October 2012 – Now

I designed & built a system to let the organization view and analyze utility data in the region in an easy to use manner and facilitate reporting our energy status for the measures mandated by Executive Order 13423. The system imports utility data from a national system and stores data in Google Drive to power a dashboard on a Google Site. It has been through several major revisions due to improvements to Google Apps Script and acquired experience with JavaScript. It initially used UI Service, a GWT-like framework for Google Site gadgets, then transitioned to a jQuery-powered page, and recently transitioned to an AngularJS application.

*Technologies:* Google Apps, Google Apps Script, HTML, JavaScript, jQuery, AngularJS, CSS, JSON

**Building Automation System (BAS) Monitor Service** Feb 2013 – Apr 2013, Nov 2014

I designed & built a script to check whether a server running InetSupervisor is working as intended based on several unique conditions not supported by the server application itself. It has been expanded over time with additional conditions and checks of the application. While it was initially a PowerShell scheduled task due to limited technical tools, I eventually built a more robust Windows service to restart the BAS as needed to resolve issues. Previously, the BAS would occasionally fail at night and fail to start up the chiller plant or boiler to bring the building back to normal occupied temperatures in the morning without a local mechanic checking on it. Now, failures are resolved before anyone in the building notices a change in comfort which is especially important for federal courthouses.

*Technologies:* PowerShell, Microsoft SQL Server, InetSupervisor, LNS, C#, LINQ

**Waste Diversion Tracker** Aug 2012 – Jan 2013

I enhanced a set of Google Spreadsheets with Apps Script to archive waste diversion reports, track data, and display the current waste diversion status of the region for the measure mandated by Executive Order 13514. The spreadsheets allow users to enter amount of materials disposed and diverted (recycled/reused) by container, which combine to show the diversion rate for at the building, service center, and regional levels. A separate script allows users to send in reports by email for automated archival in a Google Group with building and month tagging. This system is updated yearly to take advantage of Google Apps updates and manage changes to the yearly measure.

*Technologies:* Google Apps, Google Apps Script, HTML, JavaScript, CSS

**Scheduling Component for LonMaker** May 2013 – Jun 2013

I designed and built a rudimentary scheduling component as a macro in the Visio network diagram that LonMaker uses to manage a building automation network. It was a temporary measure to facilitate building management while another project overhauled the entire building automation system.

*Technologies:* Microsoft Visio, Visual Basic, LonMaker, LNS

**Advanced Metering Regional Data Collection Service** Jul 2014

I replaced a legacy third-party data collector with a more robust and efficient service. It eliminated instances of backlogging of uncollected data that frequently occurred with the older service. Data is now always collected completely at every 15-minute interval.

*Technologies:* C#, SQL, Microsoft SQL Server

**Advanced Metering Regional Front-End** May 2016 – Now

I am working on a replacement web front-end to our regional advanced metering system. The previous system is slow, unreliable, and Flash-based. This upgrade is a single-page Angular application connected to a .NET web service.

*Technologies:* C#, SQL, Microsoft SQL Server, AngularJS, HTML, CSS, UI Router, Bootstrap

[**Cosmic Companion website and app on Play Store**](https://github.com/fmorel90/cosmic) Sep 2014 – Now

I built an unofficial companion app for the Cosmic Encounter board game to simplify game setup. It secretly assigns random character choices to each player based on what expansions and level of game you are playing. This was also an opportunity to experiment with Material Design for a simple, bold design. This project began as web page, migrated to a WebView-based Android app, and is now available as both a website and a native Android app.

*Technologies:* Android Studio, Java, XML, JSON, AngularJS, JavaScript, CSS, Material Design

[**Hue Band Controls app on Play Store (private beta)**](https://play.google.com/store/apps/details?id=net.fmorel.hueband) Jan 2016 – Now

Since I owned by a Microsoft Band and Philips Hue light bulbs, I built an Android app with a background service to receive commands from a Microsoft Band and send them to a Philips Hue lighting system. For now, it can control white color temperature and brightness levels. As this app is still in early development, I am keeping the app in a private beta.

*Technologies:* Android Studio, Java, XML

**COMPUTER SKILLS**

**Web & Software Tools**

Android Studio, Microsoft Visual Studio, Microsoft Office, Google Apps, Salesforce, Microsoft Project, Microsoft Visio, Microsoft Access, Microsoft SQL Server, InetSupervisor, LonMaker

**Software Development**

Java, C#, JavaScript, AngularJS, jQuery, Google Apps Script, HTML, CSS, PowerShell, Visual Basic

**EDUCATION**

**BS in Software Engineering, Minors in Mathematics, Computer Science** May, 2013

Southern Polytechnic State University, Marietta, GAGPA 3.73

**WORK EXPERIENCE**

**Building System Analyst** General Services Administration, Atlanta, GA 7/12 – Now

* Earned the Public Building Service Commissioner’s Award for my support of the national solid waste and recycling program.
* Received FAC-P/PM Level 1 Certification (Federal Acquisition Certification for Program and Project Managers)
* Monitor and troubleshoot devices in region-wide Advanced Metering program.
* Built a dashboard for energy & water utility data on the branch’s Google Site based on a pre-existing Excel dashboard.
* Analyze utility data (both from monthly bills and more frequent advanced metering) to identify opportunities to reduce water and energy consumption in order to meet Executive Order requirements.
* Built a set of spreadsheets with added features for easier Waste Diversion tracking.
* Built an automated archival system for Waste Diversion reports using a custom-built email filter and a Google Group.
* Built a server monitor as a Windows server using SQL queries to monitor an item that the server couldn’t do itself in order to decrease response time in case of failure.
* Built a replacement service to collected advanced metering data that was faster and more reliable.