Canterbury Research

Government Information & Maps Department

University of South Carolina

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Executive Summary

Founder Credentials

Military veteran with 7+ years of analytical experience in various sectors ranging from DoD to Aerospace/Space industry. My work in the technology industry has provided me with the experience of statistically analyzing complex business and technical requirements, creating manageable location intelligence solutions, and reporting business analysis findings that support spatial decision-making and problem-solving. Lastly, my spatial/GIS experience as an Analyst, Spatial Developer and Data Scientist (Maxar Technologies) has taught me how to solve complicated problems and equipped me with the skills to do so efficiently while lowering costs and increasing revenue.

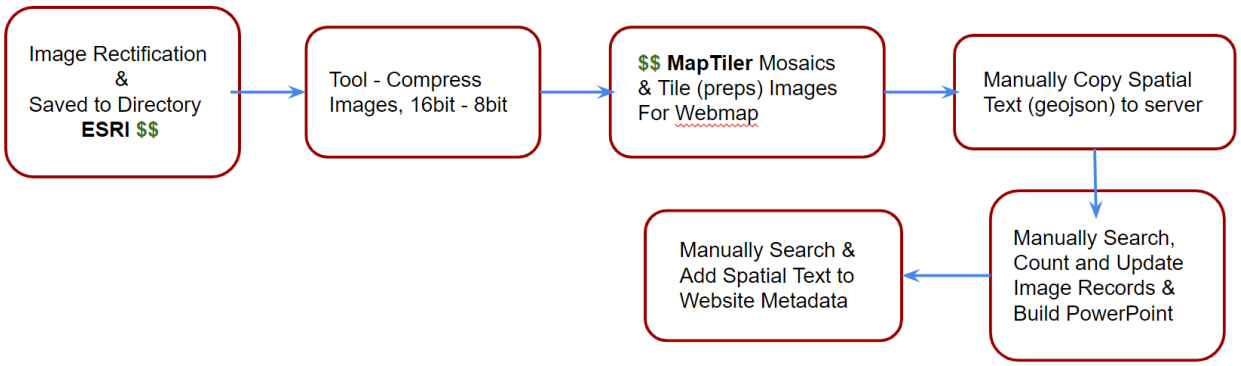
University of South Carolina, BA Geography | **Syracuse University, MS Applied Data Science** | **AWS Cloud Practitioner (2022)** | **AWS Machine Learning Specialty** (pending)

Project Concerns

The Government Information & Maps Department of the University of South Carolina strives to maintain an accurate and easily accessible historical record of imagery for all counties within the state of South Carolina. This requires a working knowledge of what imagery has been sourced and the process in which it has been placed within the geospatial database. The most pressing problem in continuing with these efforts of maintaining historical imagery, with the lack of sustainable mechanisms to improve the quality, monitoring and efficiency of the Donnelly project.

Therefore, Canterbury Research proposes that you will hire us to provide products and services that will usher in cheaper and more sustainable methods to the historical imagery process. For instance, we will provide tools to record imagery size, location, rectification stage (rectified or not), County percent coverage, website updating automated and more. We take pride in assisting clients streamline processes and understanding their data in real-time. Canterbury Research looks forward to working on the Donnelly project, therefore, once the Agreement - Letter of Intent is signed we will begin building the tools necessary to your success.

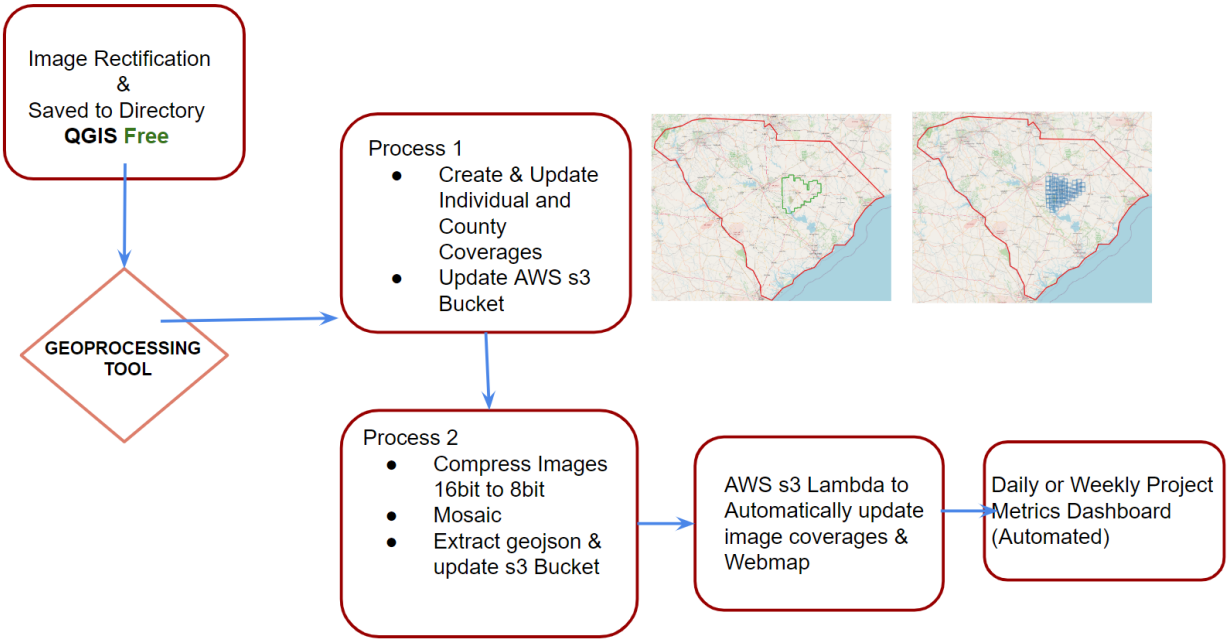
Current Process



Project Solution

Establish a new workflow that will seamlessly process rectified images and update the webmap and dashboard from a single method within minutes of rectification. This new method will remove the clucky and error prone process from the workflow and introduce an automated method that will complete multiple tasks with low monthly maintenance and annual cost.

Proposed Process



Software Needs

The program's current software products carry annual fees and cumbersome maintenance. However, proposed software products are open source and low cost to maintain and easily upgradable.

Current : ArcGIS **$$** | MapTiler **$$** | **Proposed** : Qgis **Free** | Gdal **Free**

Deliverables

Below is a list of products, processes (scripts), and software that will streamline the rectification to webmap workflow and provide real-time progress & metrics.

Products

Tableau dashboard : provides real-time metrics i.e percentage of county coverage by aerials, rate of rectification and more.

Software

QGIS : Implement a process of raster rectification on an open source (free) software. That of which will broaden students' GIS knowledge and expose them to various products used in the industry.

Processes

Sub-Process 1 : Create a process that will create vector coverages (image boundary) then append/update a broader coverage map of the specific County and year combination.

Sub-Process 2 : Upload from rectified directory and update/maintain the spatial vector coverages in an AWS s3 bucket.

Sub-Process 3 : Maintain, update or repair any AWS data connection issues to Tableau dashboard.

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