Advanced Spark Project

The goal is to create a Spark project in either Scala, or Python ( or a combination of the two that uses at least two of the advanced topics discussed in class:
- Spark Streaming
- Spark.ML
- GraphX / GraphDataframes
- Spark SQL

For this project you can choose or create the problem in which you are solving yourself:
- Use machine learning tool to analyze a stream of data or a group of data that exist on a file system like S3 or your local machine
  o Remember that you can actually set up a stream to S3, HDFS, a network enabled port on your local file system, or your Local File system
  o You can model a graph of user relationship and try to find underlying information on the users in the network based on machine learning tool
  o You can create an SQL database and compare the same type of connections to if you had the information stored in graphs instead
  o You can use Spark.ML to create an Image classifier and store the results in a SQL structure
  o Analyze Tweets and use Spark.ML to classify users or analyze and categorize their tweets to find useful information
  o Analyze Stock Market Data you store in Spark SQL to make Spark ML predictions on future trends of the mark
  o etc.

To present this project all information needs to be stored and presented on a static password protected server-less website that is created using AWS tools S3, Lambda, and CloudFront. Information that needs to be presented on this static site is the following:
- Video of you presenting you project and analyzing your code.
- An instruction set on how you created your server-less host for your site
- Link to a PDF describing your project
- Link to source code you used in your project
- Link to the source code you used for Lambda functions

Grading breakdown is as follows:

( 25 points ) Static password protected server-less site using the following AWS tools:
- Lambda (Using typescript or NodeJS)
- CloudFront
- S3
- IAMs (Optional)

( 40 points )  Site Content:
- Video of you presenting you project and analyzing your code.
- Instruction set on how you created your server-less host for your site
- Link to a PDF describing your project
- Link to source code you used in your project
- Link to the source code you used for Lambda functions

( 35 points ) Main Project Source Code:

***If your solution uses all 4 you will receive and extra 10 points on your project.