Research dashboards that can be hosted on an EC2 Web server

The dashboard will take **inputs from an RDS data store** and **dynamically update** the display based on changes to the input data in the db.

The dashboard will just need to display **6 values** based on inputs from a database and also have a clean User Interface.

**Evaluate pre-built dashboard solutions** with hosting a custom website using PHP that will display values.

As of March 13 2023, Element Solutions is planning to use Devin Moon’s implementation of a react-based dashboard.

If more complex data visualization is required, **AWS Quicksight** is a fairly inexpensive solution that can offer valuable insight with an easy to use interface.

# AWS QuickSight Tutorial

Guide that I followed → [Tutorial: Create an Amazon QuickSight dashboard using sample data](https://docs.aws.amazon.com/quicksight/latest/user/example-analysis.html)

Other guides → [Building a dynamic Dashboard using AWS QuickSight](https://www.youtube.com/watch?v=MZGloAruLGQ)

[Data Prep with AWS QuickSight](https://www.youtube.com/watch?v=fCSU3D1w79A)

1. **Create and prepare a Marketing dataset using the Web and Social Media Analytics sample data.**
   1. On the Amazon QuickSight start page, go to the **Datasets** tab on the left and choose **New dataset**
   2. Under **FROM EXISTING DATA SOURCES** choose **Web and Social Media Analytics**
      1. Choose **Create dataset** then choose **Edit/Preview data**
   3. Rename the dataset by clicking on **Web and Social Media Analytics** in the top left and typing the new name
   4. Exclude fields by going to the **Fields** menu, selecting the fields you want to exclude, and choosing **Exclude fields**
   5. Rename a field by going to the **Fields** menu, scrolling to **Website Pageviews**, and choosing **Edit name and description**
   6. Add a calculated field by choosing **Add calculated field**
      1. You can name the field in the top left
      2. Available fields are under the **Fields** menu and functions are under the **Functions** menu. Click once to see additional information and click twice to automatically add to code.
2. **Create a Marketing analysis and add several visuals to it.**
   1. On the Amazon QuickSight start page, go to the **Analyses** tab on the left and choose **New analysis**
   2. Choose the **Business Review** sample dataset then choose **Use in analysis**
   3. Stick with the default **Interactive sheet**
   4. Creating a new visual by clicking on the **Add** button then choosing **Add visual**
      1. Go down to **Visual types** to select the type of visual you want to use. The default **AutoGraph** automatically chooses the best visualization for your fields.
      2. Click on the desired fields you want to use, then expand **Field Wells** to specify how those fields will be presented
3. **Modify the visuals in the analysis, including the following:**
   1. Adding another measure to an existing visual
   2. Changing chart colors
   3. Changing date granularity
   4. Changing the size and layout of the visuals
   5. Applying a filter
4. **Publish a dashboard based on the analysis.**

# Helpful Documentation

[What Is Data Visualization?](https://aws.amazon.com/what-is/data-visualization/)

## QuickSight

[What is Amazon QuickSight?](https://docs.aws.amazon.com/quicksight/latest/user/welcome.html)

[How Amazon QuickSight works](https://docs.aws.amazon.com/quicksight/latest/user/how-quicksight-works.html)

[Connecting to data in Amazon QuickSight](https://docs.aws.amazon.com/quicksight/latest/user/working-with-data.html)