Notes

AWS Project Documentation

# Data Visualization Workflow with AWS QuickSight

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Notes

# QUICKSIGHT

Here are 5 key points about AWS QuickSight:

- **Serverless Business Intelligence (BI):**

AWS QuickSight is a fully managed, serverless BI tool that enables you to create interactive dashboards and visualizations.

- **Integration with AWS Services:**

It seamlessly integrates with AWS services like S3, RDS, Redshift, Athena, and external data sources, making data ingestion easy.

- **ML Insights:**

QuickSight includes built-in machine learning features to detect anomalies, forecast trends, and generate automatic insights.

- **Scalability and Pay-per-Session Pricing:**

It scales automatically to handle large datasets and offers cost-effective pay-per-session pricing for dashboards.

- **Secure and Shareable:**

Supports multi-tenant environments, role-based access control (RBAC), and allows secure sharing of dashboards within and outside your organization.

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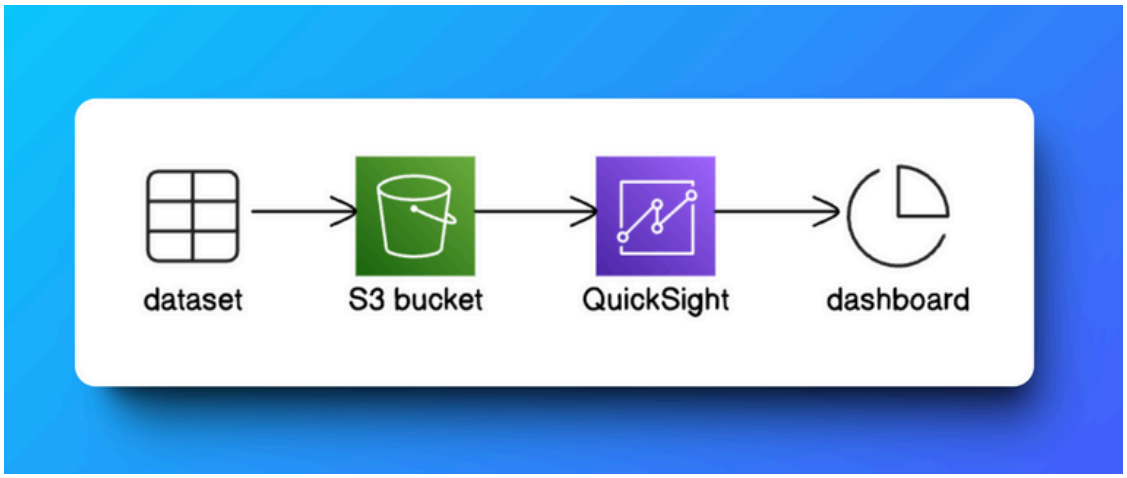
## Architecture Diagram :




**The diagram illustrates the data visualization workflow using AWS services:**

1. **Dataset:**
   - The starting point is a dataset (e.g., a CSV, JSON, or database export).
   - This dataset contains the raw data you want to analyze and visualize.
   - You must prepare and clean the dataset before uploading it.
2. **S3 Bucket:**
   - The dataset is uploaded to an Amazon S3 bucket, which acts as the storage service.
   - S3 is scalable, durable, and secure, making it ideal for storing datasets of any size.
   - Proper permissions must be set for QuickSight to access the dataset.
3. **QuickSight**:
   - Amazon QuickSight is a business intelligence (BI) service that connects to the dataset in S3.
   - It allows you to prepare, analyze, and visualize data through various charts and graphs.
   - Data preparation tasks, such as filtering and transforming data, can be done directly in QuickSight.
4. **Dashboard**:
   - QuickSight generates interactive dashboards based on the data.
   - These dashboards include visualizations like bar charts, pie charts, tables, and trends.
   - Dashboards can be shared with stakeholders, enabling decision-making.

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# Steps involved in making the Project

1. **Prepare the Dataset**
   - Collect the data you want to visualize (e.g., sales, customer data, or performance metrics).
   - Ensure the dataset is cleaned and formatted (e.g., CSV, JSON, or database export).

2. **Upload Data to Amazon S3**
   - Log in to the AWS Management Console.
   - Create an S3 bucket (if not already created).
   - Upload your dataset to the S3 bucket.
   - Set the necessary permissions for AWS QuickSight to access the bucket.

3. **Configure AWS QuickSight**
   - Open the QuickSight service in the AWS Management Console.
   - Set up a data source by connecting QuickSight to your S3 bucket.
   - Import your dataset into QuickSight for analysis.

4. **Build Visualizations**
   - Use QuickSight to analyze and prepare the data (e.g., filtering, grouping, or transforming).
   - Create visualizations like bar charts, pie charts, line graphs, or tables.
   - Combine visualizations into an interactive dashboard.

5. **Publish and Share the Dashboard**
   - Save your dashboard and publish it for use.
   - Share it with stakeholders by granting access or exporting reports.
   - Enable periodic updates to reflect real-time or recent data changes.

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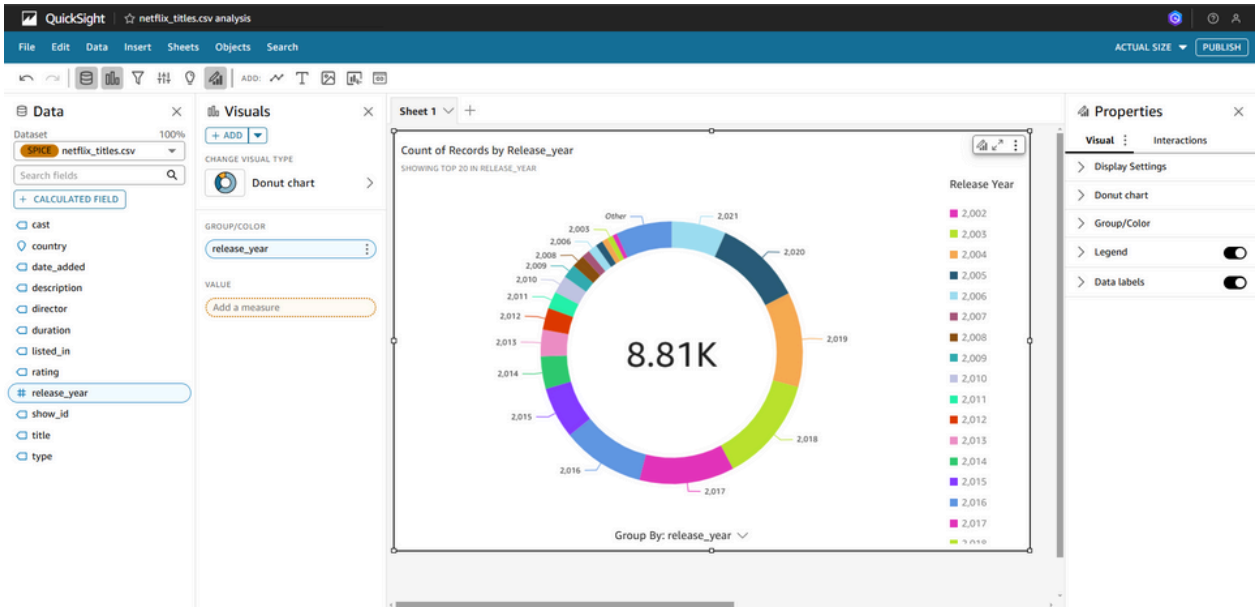
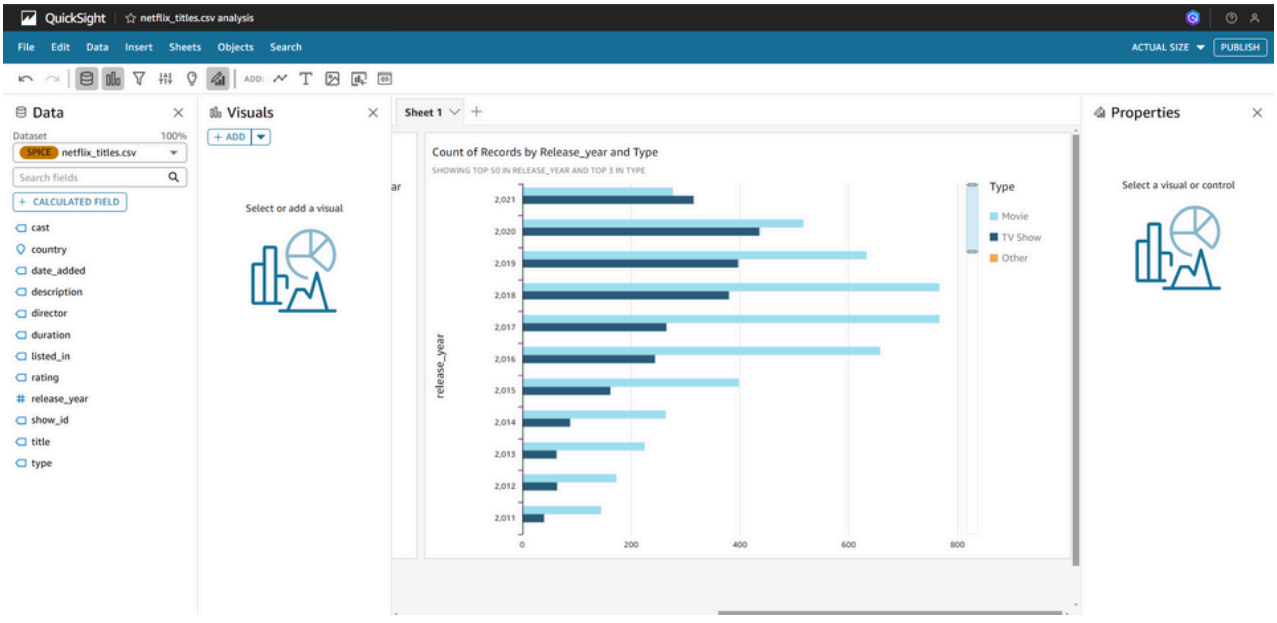
## Sample Output:




For Detialed Description:
https://community.nextwork.org/c/all-aws-projects/project-2-visualise-netflix-data-using-amazon-quicksight

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