Internship Report

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Acknowledgement

Thank you my Team.
We work so hard to get this project done. Thank you for your hard work.

Manager
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Content

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1. **Introduction**

Amazon QuickSight is a very fast, cloud-powered business intelligence (BI) service that makes it easy for all employees to build visualizations, perform ad-hoc analysis, and quickly get business insights from their data. My job is going to provide the first user experience for our customers. It has two main parts. Part one focus on user preview experience. Part two focus on sample analysis for amazon customers. Amazon QuickSight uses a new, Super-fast, Parallel, In-memory Calculation Engine (“SPICE”) to perform advanced calculations and render visualizations rapidly. Amazon QuickSight integrates automatically with AWS data services, enables organizations to scale to hundreds of thousands of users, and delivers fast and responsive query performance to them via SPICE’s query engine. At one-tenth the cost of traditional solutions, Amazon QuickSight enables you to deliver rich BI functionality to everyone in your organization.

2. **Company Description**

Amazon Web Services (AWS), a subsidiary of Amazon.com, offers a suite of cloud-computing services that make up an on-demand computing platform. These services operate from 13 geographical regions across the world. The most central and best-known of these services arguably include Amazon Elastic Compute Cloud, also known as "EC2", and Amazon Simple Storage Service, also known as "S3". In seattle, there are almost 30 buildings belongs to amazon, but there is only one building for AWS. Right now AWS revenue is booming crazy and thanks to the

![amazon web services](image)

3. **Background of the problem and project**

Let’s image that when a new user come to our website. They have no idea what is Quicksight, how Quicksight works and What they should do to work with the tool. Here comes to my project which letting the user to get familiar with Quicksight. The basic concept
behind it is to inform the user to learn and play with the tool. We do not want to confuse the user. We just need the direct information.

AWS’s QuickSight Business Intelligence offering enables users of Amazon’s data services to easily create queries, reports and visualizations starting at $9-18 per user per month. QuickSight is currently in preview, but we’ve heard from partners that the subscription model is luring buyers away from perpetual license vendors like Tableau. The product is not generally available yet, but we expect the as-a-service model to exert pricing pressure on traditional BI offerings from other vendors including SAP, Oracle and IBM. We’d expect a similar revenue ramp to what we saw with RedShift ($25m the first year growing 200%+). However, Microsoft has beaten AWS to market with PowerBI Pro with lower pricing and a richer feature set – we expect both vendors to use respective BI offerings to drive adoption of their broader cloud portfolios.

Here are the key features I was working with for AWS Quicksight.

Get Started Quickly- Just log in, point to a data source, and create your first visualization in minutes

No need to spend months building complex data models and invest in complex and costly software or hardware to generate the first report. Simply log in to Amazon QuickSight, point to a data source or upload a file, and begin visualizing your data with actionable insights in about a minute.
Upload files or connect to AWS data services

Easily connect Amazon QuickSight to AWS data services, including Amazon Redshift, Amazon RDS, Amazon Aurora, Amazon EMR, Amazon DynamoDB, Amazon S3, and Amazon Kinesis; upload CSV, TSV, and spreadsheet files; or connect to third-party data sources such as Salesforce.

Smart visualizations are dynamically optimized for your data

Amazon QuickSight automatically infers data types and relationships and provides suggestions for the best possible visualizations, optimized for your data, to help you get quick, actionable business insights.
Generate very fast, interactive visualizations on large datasets.

Amazon QuickSight uses SPICE – a Super-fast, Parallel, In-memory Calculation Engine built from the ground up - to generate answers on large datasets.
Share insights and collaborate with others

Securely share your analysis with others in your organization by building interactive stories for collaboration using the StoryBoard and annotations. Recipients can further explore the data and respond back with their insights and knowledge, making the whole organization efficient and effective.

Amazon QuickSight provides partners a simple SQL-like interface to query the data stored in SPICE so that you can continue using your existing BI tools from AWS BI Partners while benefiting from the faster performance delivered by SPICE.

These are the key features to inform the user. It provides a very clean message for the user. By introducing a business analytics tool, AWS could also expand its customer base beyond the information technology market to include non-technical employees. That could help businesses that already subscribe to AWS expand their subscriptions to include marketing departments and other business segments that might otherwise use Microsoft's Power BI tool.

The second part is sample analysis. When the user comes to our website the first time, we will automatically provide sample analysis for our customers. Thus, our customer can play with the tool and they do not need to upload any files for themselves. I think it is necessary and important from a customer perspective. Amazon is one of world’s most Customer Obsession companies-Leaders start with the customer and work backwards. They work
vigorously to earn and keep customer trust. Although leaders pay attention to competitors, they obsess over customers.

Here are the key features for sample analysis.

Super-fast, Parallel, In-memory, Calculation Engine ("SPICE")

Built from the ground up for the cloud, Amazon QuickSight's Super-fast, Parallel, In-memory, Calculation Engine ("SPICE") uses a combination of columnar storage, in-memory technologies enabled through the latest hardware innovations, machine code generation, and data compression to allow users to run interactive queries on large datasets and get rapid responses. SPICE supports rich calculations that help customers derive valuable insights from their analysis without ever having to worry about provisioning or managing infrastructure. SPICE automatically replicates data for high availability and also enables Amazon QuickSight to scale to thousands of users who can all simultaneously perform fast interactive analysis across a wide variety of AWS data sources.

Sharing and Collaboration

Amazon QuickSight allows you to easily share business insights by packaging them up as interactive stories that you can share with others. Using the StoryBoard feature in Amazon QuickSight, you can combine visualizations into business dashboards, annotate them with comments, and share in a secure manner with individuals or broad groups in your organization.

Native Access on Major Mobile Platforms

You can access your data on Amazon QuickSight using native applications for iPad, iPhone, Android phones and tablets. You also have control over the availability of analyses, stories and dashboards for offline viewing, and creating annotations in offline mode, to be reconciled when your device is reconnected to the Internet.

Smart Visualizations

Amazon QuickSight comes with a built-in suggestion engine that provides you with recommended visualizations based on the properties of the underlying datasets. Suggestions serve as possible first or next steps of an analysis and remove the time-consuming task of interrogating and understanding the schema of your data. As you drill in to your data, Amazon QuickSight provides the most appropriate graph types to visualize your data using AutoGraph, a collection of algorithms that learn over time the best visualizations that match your analytical pattern.
4. Summary and concluding remarks

Customer obsession:

I always ask for user’s experience. I will constantly talk with our customer for better user experience. Once I was informed by the test engineer that it is better to get add a new feature. I quickly response to it and added the feature to the project since it is better for customer experience. I know amazon is a customer obsession company.

Deliver results:

This internship I have faced so many setbacks during the development. Although my mentor was helpful most time, there are some parts he was not familiar with. I learn how to find the right source, search for wiki and other online source to solve the problem. I could also ask other team member for help.

Bias for actions:

I am really productive on my project. I literally have two projects. One is for the basic requirement, another is for the additional project. I keep my to-do list on the schedule. Everything is on time.

This internship teaches me a lot. I learned so much not only from technologies but also people to people relationships. It is a good practice that prepared me to work hard and dive deep. The internship was also good to find out what my strengths and weaknesses are. This helped me to define what skills and knowledge I have to improve in the coming time. It would be better that the knowledge level of the language is sufficient to contribute fully to projects. After my master I think that I could start my working career. However I could perform certain tasks in research better if I practice/know more the research methodologies applied in cetacean studies. It would also be better if I can present and express myself more confidently. At last this internship has given me new insights and motivation to pursue a career in computer science.

I got insight into professional practice. I learned the different facets of working within a big company. I experienced that CS, as in many organisations, is an important factor for the progress of projects.

5. Schedule
Week 1: to 5/27
The milestone concerns the intern on-boarding to Amazon, followed by training and exposure to our development environment and methodologies.

Week2: to 6/3
The milestone concerns finalized project goals and features. Everyone including product manager, senior manager, mentor, UX designer and me need to agree with the goals.

Week3: to 6/10
The milestone concerns setting up the plans to finish this project and familiarization of the code system. Learn Javascript and react as much as possible.

Week4: to 6/17
The milestone concerns part one of the project. The project mainly contains two parts. One is user preview on web. Another is sample analysis on web. It only concentrates on the first part of the project which is pop-up the preview.
Details:
Enable a button to pop up a window and the window has a picture.
Add the sample analysis button on the home page.
Code review this small part.

Week5: to 6/24
The milestone concerns part one of the project.
Details:
That window has a sliding feature to show different pages.
The preview window will trigger another window which lists the option for users to choose sample analysis.
Code review this small part.

Week6: to 7/1
The milestone concerns part two of the project. The project has a pop up window letting users to choose which sample data they need and we show the sample data analysis to they. I may also need to code review for part one of the project. It has two part. One is the layout of the web. Another is the AppService.
Details:
Design a new web page layout for the sample analysis which means construct a new web page.
Code review.

Week7: to 7/8
The milestone concerns part two of the project.
Details:
Continue to design the web page. Started to familiar with the AppService.
• When no analyses or samples are present on the home page need UX to prompt the user to create an Analysis or choose an existing sample analysis.
• Need a way to re-show the sample analyses modal if the user decides to skip it.

Code review.

Week 8: to 7/15
The milestone mainly concerns part two of the project.
Details:
Need to implement UX to support locking an Analysis (for the sample analysis use-case).
Need to implement UX to support locking a Data Set (for the sample analysis use-case).
Code review.

Week 9: to 7/22
The milestone mainly concerns part two of the project.
Details:
• 3 Options:
  o Pre-create sample analyses on home page.
  o Add sample analyses tab
  o Allow the user to select sample analyses from the getting started modal.
Code review.

Week 10: to 7/29
The milestone mainly concerns part two of the project. Combine with the other code and connect part one and two together with goal.
Final code review.

Week 11: to 8/5
Wrap up all the stuff and preparation of the final presentation next week. Self-evaluation start.

Week 12: to 8/12
The milestone concerns the final presentation to the team.

Note:
Week 6 to week 10 is for part 2 of the project which is sample analysis on Web. It basically has two parts. One is design layout. Another is backend. Each week’s goal is all flexible to another. I will either do backend first or later, depending on when we find out a good approach to implement it.

IOS part is on the stretch sheet. I will mainly focus on the web first and IOS second. Since there are some changes for my project. My IOS project will be delayed which is initially scheduled for week 8.
It is better to Code review for every small part.