

Project Report

| | |
|--------------|--|
| Date | 14 November 2022 |
| Team ID | PNT2022TMID50563 |
| Team Members | V.Nanthini (Team Leader) R.S.Shalukar (Team Member 1) R.Malar Mathi (Team Member 2) S.Maheshwari(Team Member 3) |
| Project Name | Project - Global Sales Data Analytics |

1. INTRODUCTION

1.1 Project Overview

Even with loads of data available at hand, a lot of companies struggle to identify key information such as how they can boost their sales or where they can minimise their losses. This is when they approach companies that offer analytics services. Through these services, businesses will be able to get useful insights into how well (or bad) their business is doing and they end up making impactful business decisions.

1.2 Purpose

To analyse and identify trends in given data in order to make impactful business decisions.

2. LITERATURE SURVEY

2.1 Existing problem

Shopping online is currently the need of the hour. Because of this COVID, it's not easy to walk in a store randomly and buy anything you want. So try to understand a few things like, Customer Analysis and Product Analysis of this Global Superstore.

2.2 References

| S.No | Paper/Title | Year | Journal | Method | Advantage | Disadvantages |
|------|--|----------------|-------------------------|--|---|--|
| 1 | Effects of 3D Virtual "Try-On" on Online Sales and Customers' Purchasing Experiences | September 2020 | IEEE Access (Volume: 8) | 1)VTO technology consists of making a virtual body model from the customer's own body size, 3D garment modelling, and interactive try-on and mix-and-match of garments. Many studies explain the method of making a virtual body by scanning or measuring the customer's body. 2)We propose a new method, instead of 2D CAD | 1) Virtual try-on (VTO) is a new technology used to help customers try on and mix and match apparel without a fitting room. 2)It appeared when conventional shops were in crisis because of consumers' shift to online retailers. VTO technology has been adopted because it has many advantages in both retail channels | The thing to overcome is the psychological barrier on the side of the customer, and convincing them to use and trust virtual try-on applications. That requires being extra clear about what's happening with user data such as images and videos, where they're processed, how they're used, and so on. |

| | | | | | | |
|---|--|-----------------------|---------------------------|--|--|---|
| | | | | <p>patterns, we use 3D garment photos; to make a 3D garment mesh surface because 2D CAD patterns are always copyrighted and require</p> | | |
| 2 | <p>Sales Analytics and Big Data Developments Needed Now to Address Practitioner- Identified Emerging Biopharmaceuti cal Sales Force Strategic and Operational Issues</p> | <p>March 2021</p> | <p>Research Paper</p> | <p>The association of cancer drug costs and total cancer treatment costs per cancer site uses two methods: Kaplan-Meier Sample Average (KMSA) method and an approach similar to the Cox proportional hazard model. Generalised Propensity Score (GPS) based weighting with bootstrap standard errors can be used to estimate the marginal effect of detailing on drug utilisation.</p> | <p>This paper provides a commercial/sales analytics, big data management, and organisational blueprint for companies on how to prepare and operate successfully in this evolving sales force pharma landscape. Focuses largely on patient,payer,sales and marketing analytics.</p> | <p>Survey respondents from biopharmaceutical consulting companies also noted expertise focus is not in the areas identified here required for the industry to respond effectively to change environmental trends.</p> |
| 3 | <p>Impact of big data analytics on sales performance in pharmaceutical</p> | <p>April 2021</p> | | <p>This study is related to the quantitative research method. This method emphasises the statistical, mathematical,</p> | <p>Sales performance effectively and efficiently achieves the targets in the sales process by examining opportunities and improving closing rates</p> | <p>The data were collected from a developing country, and the results of this research may be different in developed countries.</p> |

| | | | | | | |
|---|---|-----------|-------------------------|--|---|--|
| | organisations | | | or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. | | |
| 4 | Visual Analytics for Decision Support: A Supply Chain Perspective | June 2021 | IEEE Access (Volume: 9) | 1. Visualisation types suitable for particular analytical goals in each of the SC activities, i.e Visualisation Techniques. 2. Analytical reasoning by analysts involved in the process of analysis, i.e., tactics. | 1. The lack of identifying specific SC business decisions that can be supported by VA. 2. The lack of exploring various analytical capabilities of SC VA systems. 3. The lack of identifying the state of the art in visualisation techniques and tactics have been resolved. | First, the application of VA in supporting the source and make processes of the SC may be explored, such as cost modelling of different sources and production scheduling. Second, visualising the impact of external variables on different SC operations such as the effect of weather forecast on sales may be investigated more extensively. |

Paper links:

1. Effects of 3D Virtual “Try-On” on Online Sales and Customers’ Purchasing Experiences

<https://ieeexplore.ieee.org/document/9189849>

2. Sales Analytics and Big Data Developments Needed Now to Address Practitioner-identified Emerging Biopharmaceutical Sales Force Strategic and Operational Issues

<https://www.pmsa.org/jpmsa-vol05-article01>

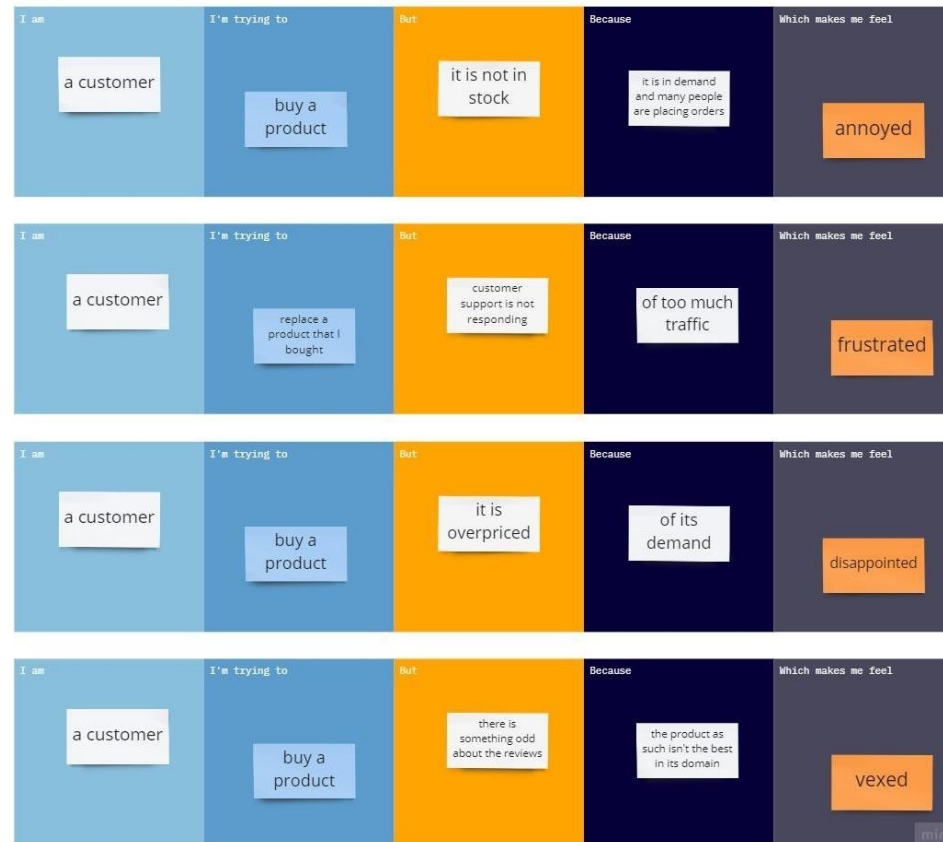
3. Impact of big data analytics on sales performance in pharmaceutical organisations

<https://doi.org/10.1371/journal.pone.0250229>

4. Visual Analytics for Decision Support: A Supply Chain Perspective

<https://ieeexplore.ieee.org/document/9445829>

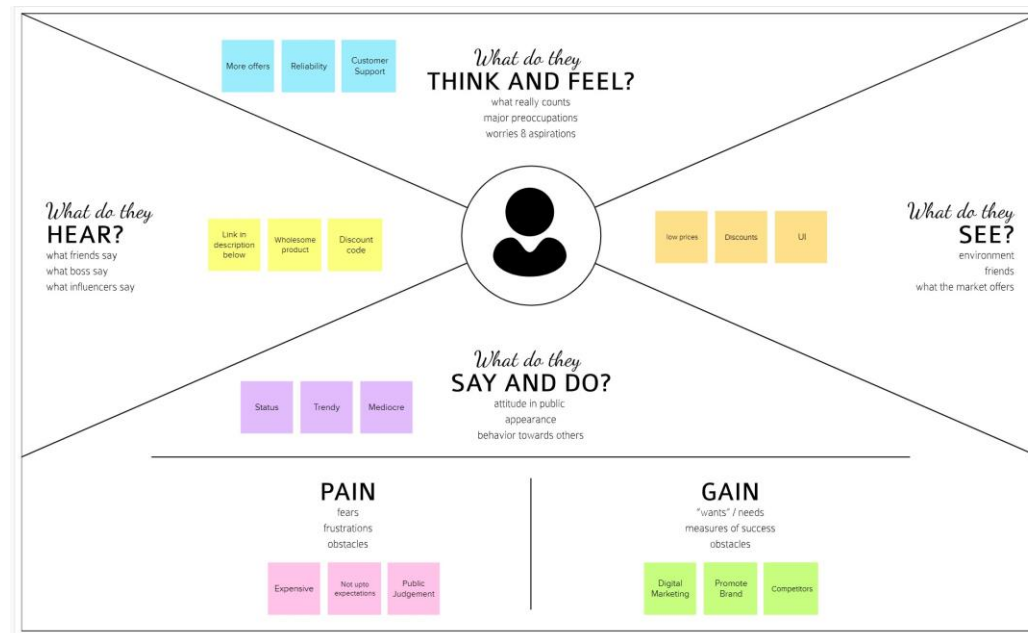
2.3 Problem Statement Definition



| Problem Statement (PS) | I am (Customer) | I'm trying to | But | Because | Which makes me feel |
|------------------------|-----------------|---------------------------------|--|--|---------------------|
| PS-1 | a customer | buy a product | it is not in stock | it is in demand and many people are placing orders | annoyed |
| PS-2 | a customer | replace a product that I bought | customer support is not responding | of too much traffic | frustrated |
| PS-3 | a customer | buy a product | it is overpriced | of its demand | disappointed |
| PS-4 | a customer | buy a product | there is something odd about the reviews | the product as such isn't the best in its domain | vexed |

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation & Brainstorming

| Atif | Rohith | Hamza | Tahir |
|--|---------------------------------------|---|---------------------------------------|
| Evaluate discounts | Identify, optimize and forecast sales | Analyze which products are in demand | Understand regional and zonal demands |
| All data about a product that is necessary for a customer to buy must be available | Invest in right sales opportunity | Prioritize orders based on necessity and demand | Analyze revenue generated |
| Identify which markets are thriving in each region/zone | Perform segment-wise analysis | Increase supply for products in demand and vice versa | Analyze sales trends |
| Dashboard must be interactive and user-friendly | Visualize data to get clearer idea | Set targets, KPIs and MoS | Identify returning customers (if any) |

Top 3 ideas :

1. Identify which markets are thriving in each region/zone
2. Perform segment-wise analysis
3. Identify returning customers (if any)

3.3 Proposed Solution

| S.No. | Parameter | Description |
|-------|--|---|
| 1. | Problem Statement (Problem to be solved) | Shopping online is currently the need of the hour. Because of this COVID, it's not easy to walk in a store randomly and buy anything you want. |
| 2. | Idea / Solution description | Developing a dashboard with scalability of data for users to get important intel regarding sales of products online. |
| 3. | Novelty / Uniqueness | Providing a hierarchy of products that are trending, useful for investors, business people as well as layman people who are curious about global sales. |
| 4. | Social Impact / Customer Satisfaction | Information is wealth. This would help people in maximizing their profits and minimizing their losses. A clean and clear analysis understandable by all. |
| 5. | Business Model (Revenue Model) | Revenue Stream: <u>Outflow:</u> investors analysing where to invest wisely by recognizing trends and demands. <u>Inflow:</u> boosted sales of various products in certain regions. |
| 6. | Scalability of the Solution | On a wider market it could be used by investors, customers as well as layman people. Ease of access for users. |

3.4 Problem Solution fit

| | | | | |
|--|---|--|---|--|
| Define CS, fit into CC | 1. CUSTOMER SEGMENT(S) <small>CS</small> Who is your customer? (i.e. working parents of 3-7 y.o. kids) | 6. CUSTOMER CONSTRAINTS <small>CC</small> What obstacles prevent your customers from doing what or limit their choices of solutions? (i.e. competing prices, budget, no cash, various constraints, available services) | 5. AVAILABLE SOLUTIONS <small>AS</small> Which solutions are accessible to the customer & which they have the problem or need to get the job done? What have they tried in the past? What good & more, or better solutions have they seen and paper to go elsewhere to digital subscription | Explore AS, differentiate |
| | People in need of products for either personal use or work | - Product are out of stock - Products are overpriced - Delivery delay | - Contact Customer Support - Cancel order - Change platform - Switch to offline mode | |
| Focus on JAP, tap into BE, understand RC | 2. JOBS-TO-BE-DONE / PROBLEMS <small>JAP</small> Which job-to-be-done (or problems) do you address for your customers? There could be more than one, explore different sides. | 9. PROBLEM ROOT CAUSE <small>RC</small> What is the root reason that this problem exists? What is the chain of events behind the need to do this job? (i.e. customers have to do it because of the change in regulations) | 7. BEHAVIOUR <small>BE</small> What does your customer do to address the problem and get the job done? (i.e. directly observed, how they solve problem, consider, calculate usage and benefits, indirectly associated, customers spend time doing not value-adding work (i.e. frustration)) | Focus on JAP, tap into BE, understand RC |
| | - Save customers' time - Save customers' money - Customers don't have to venture outside in order to their shopping | Products out of stock- high demand, low supply Overpriced products- poor assessment of the products' actual worth Delivery delay - issues on retailer's end | - Contact Customer Support - Cancel order - Change platform - Switch to offline mode | |
| Define CS, fit into CL | 3. TRIGGERS <small>TR</small> What triggers customers to act? (i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news) | 10. YOUR SOLUTION <small>SL</small> What kind of solution does Customer describe the best? Adapt your solution to fit Customer behaviour, and Triggers, Channels & Emotions for marketing and communication. | 8.1 ONLINE CHANNELS <small>CH</small> What kind of online do customers take action? Extract online channels from box #7 Behaviour | Explore AS, differentiate |
| | - New trends - The need to stay update with current technology advancements - Discounts - Buying essentials - Word of mouth - Peer pressure | - Analyze demands and increase supply accordingly - Place seasonal discounts to keep customers on their toes - Engage with customers regularly and gain their trust - Analyze product quality through customer feedback | - Customer Support - Feedback in the form of reviews - Online advertisements | |
| Define CS, fit into CL | 4. EMOTIONS: BEFORE / AFTER <small>EM</small> How did customer feel when they face a problem or a job and afterwards? (i.e. frustrated, annoyed, in control, use it in your communication strategy & design) | - Analyze demands and increase supply accordingly - Place seasonal discounts to keep customers on their toes - Engage with customers regularly and gain their trust - Analyze product quality through customer feedback | 8.2 OFFLINE CHANNELS <small>CH</small> What kind of offline do customers take action? Extract offline channels from box #7 Behaviour and use them for customer development. | Explore AS, differentiate |
| | frustrated, annoyed, betrayed, worried ↓ relieved, assured, happy, confident | If you are working on an existing business, write down your current solution. First, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and enables customer behaviour. | - Sponsored advertisements - Word of mouth | |

4. REQUIREMENT ANALYSIS

4.1 Functional requirement

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|-------------------------------|--|
| FR-1 | User Registration | Registration through Form Registration through Gmail Registration through LinkedIn |
| FR-2 | User Confirmation | Confirmation via Email Confirmation via OTP |
| FR-3 | Collects Data | Providing CSV file Authentic Datasets |
| FR-4 | Cleans the given Data | Prepares data for EDA purpose |
| FR-5 | Visualisation of Data | Identifying trends in given data Accurate visualisation of provided numbers |
| FR-6 | Dashboard | Analysation of the datasets Key performance indicator |

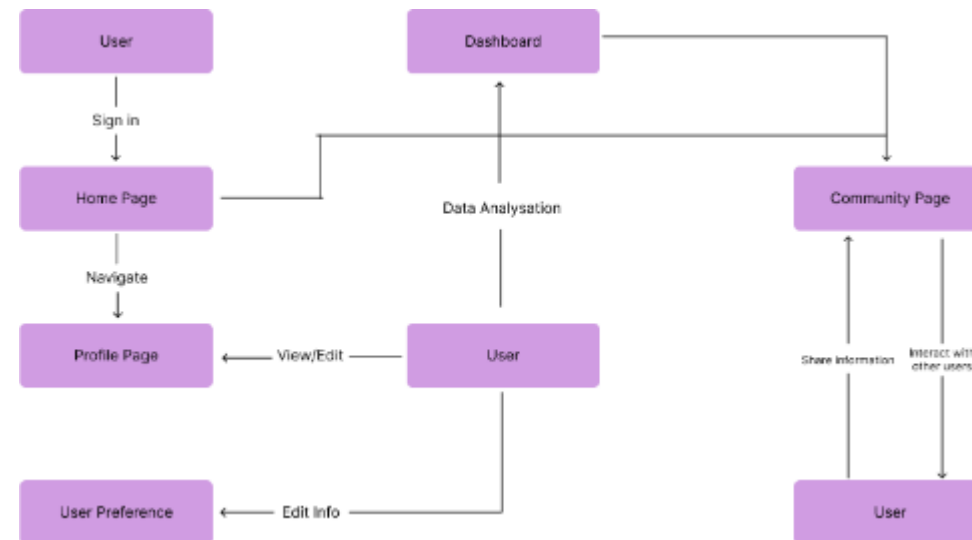
4.2 Non-Functional requirements

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|--|
| NFR-1 | Usability | User friendly design with interactive UI/UX |
| NFR-2 | Security | Users could create accounts that require authentication by sending OTP to their Email address. They could share their datasets in the app's community or make their account private. |
| NFR-3 | Reliability | App could be run offline while server maintenance takes place. Server traffic wouldn't be an issue. |
| NFR-4 | Performance | Requires minimum system requirements, hence could be accessible in many devices with faster loading time. |

| | | |
|-------|---------------------|---|
| NFR-5 | Availability | Server is online 24/7 hence users could use the app at any time. App will work offline as well. |
| NFR-6 | Scalability | Scalability reflects the ability of the software to grow or change with the user's demands. |

5. PROJECT DESIGN

5.1 Data Flow Diagrams



5.2 Solution & Technical Architecture

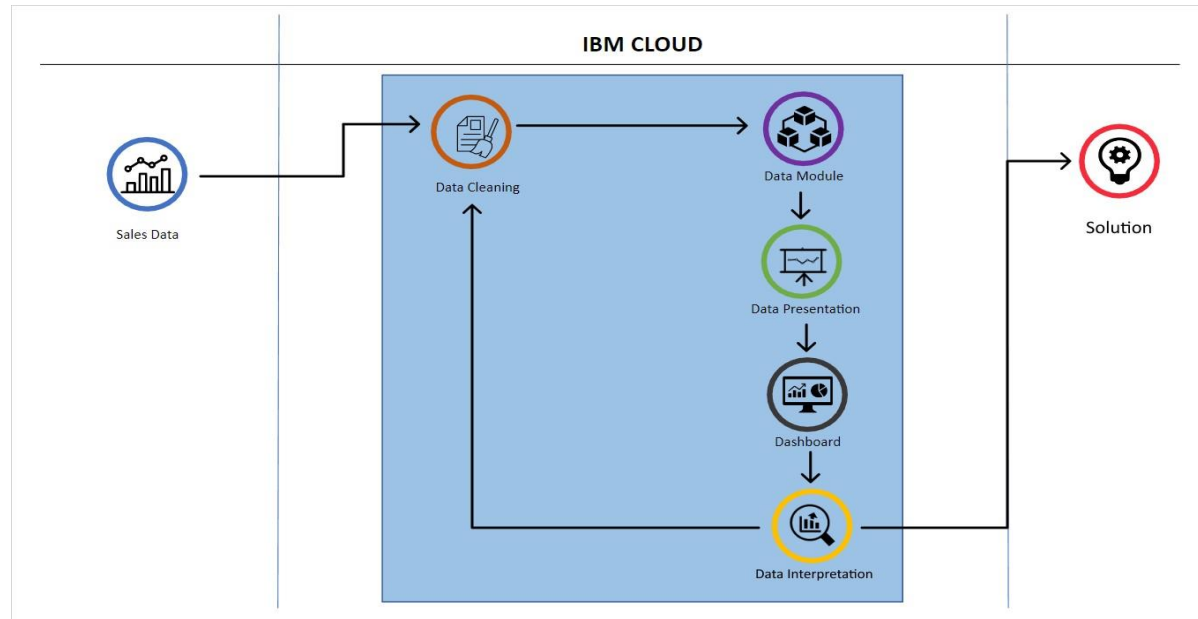


Table-1 : Components & Technologies:

| S.No | Component | Description | Technology |
|------|--------------------------------|---|----------------------------------|
| 1. | User Interface | How user interacts with application e.g. Web UI, Mobile App, Chatbot etc. | IBM Cognos Analytics with Watson |
| 2. | Storage Infrastructure (Cloud) | Customer sales data is uploaded in cloud through interface | IBM Cloud |
| 3. | Working with Dataset | Uploading, Cleaning and Processing dataset | IBM Cognos + IBM Cloud |
| 4. | Data Exploration | Upload data is explored to identify trends | IBM Cognos |

| | | | |
|----|--------------------|--|----------------------------|
| 5. | Data Visualization | Multiple types of graphs are shown according to customer data and requirements | IBM Cognos Dashboard |
| 6. | Cloud Database | Database Services on Cloud | IBM DB2, IBM Cloudant etc. |
| 7. | Viewing Data | User logs in to application to view visualizations for uploaded data | IBM Cognos Dashboard |
| 8. | External API | Enables users to integrate Cognos UI into other applications | Cognos API |

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|--------------------------|--|---|
| 1. | Open-Source Frameworks | List the open-source frameworks used | IBM Cognos, IBM Cloud ,IBM Watson |
| 2. | Security Implementations | Secure user information and data | Active Directory |
| 3. | Scalable Architecture | Supports various data sizes | Web 3.0 IBM Cloud |
| 4. | Availability | Multi page layout providing various visualizations of data and provide full support irrespective of platform and device specifications | Cognos Business Intelligence Server |
| 5. | Performance | Withstand huge data and and process them without crashing | IBM Cognos , Performance Management Hub |

5.3 User Stories

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Release |
|-----------|-------------------------------|-------------------|---|--|----------|----------|
| Customer | Downloading data | USN-1 | As a user, I can download data to be analyzed | Data can be downloaded | Low | Sprint-1 |
| Customer | Data cleaning and preparation | USN-2 | As a user, I can enter my sales data to clean and prepare it for analysis | Data is prepared and cleaned | High | Sprint-1 |
| Customer | Exploratory Data Analysis | USN-3 | As a user, I can identify trends and visualize them | Performed EDA | Medium | Sprint-2 |
| Customer | Dashboard | USN-4 | As a user, I can prepare an interactive dashboard | Can interact with dashboard | High | Sprint-3 |
| Customer | Dashboard | USN-5 | As a user, I can conduct business analysis to make business decisions | Can make business decisions | Medium | Sprint-3 |
| Customer | Story | USN-6 | As a user, I can make a story using cognos | Story can be made | Medium | Sprint-4 |
| Customer | Web page | USN-7 | As a user, I can make a web page and embed the dashboard in it | Interactive web page with dashboard embedded in it | High | Sprint-4 |

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|----------|-------------------------------|-------------------|---|--------------|----------|----------------------------|
| Sprint-1 | Downloading data | USN-1 | As a user, I can download data to be analyzed | 2 | Medium | Atif, Rohith, Hamza, Tahir |
| Sprint-1 | Data cleaning and preparation | USN-2 | As a user, I can enter my sales data to clean and prepare it for analysis | 3 | High | Atif, Rohith, Hamza, Tahir |
| Sprint-2 | Exploratory Data Analysis | USN-3 | As a user, I can identify trends and visualize them | 2 | Medium | Atif, Rohith, Hamza, Tahir |
| Sprint-3 | Dashboard | USN-4 | As a user, I can prepare an interactive dashboard | 3 | High | Atif, Rohith, Hamza, Tahir |
| Sprint-3 | Dashboard | USN-5 | As a user, I can conduct business analysis to make business decisions | 2 | Medium | Atif, Rohith, Hamza, Tahir |
| Sprint-4 | Story | USN-6 | As a user, I can make a story using cognos | 2 | Medium | Atif, Rohith, Hamza, Tahir |
| Sprint-4 | Web page | USN-7 | As a user, I can make a web page and embed the dashboard in it | 3 | High | Atif, Rohith, Hamza, Tahir |

6.2 Sprint Delivery Schedule

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|----------|--------------------|----------|-------------------|---------------------------|---|------------------------------|
| Sprint-1 | 5 | 6 Days | 24 Oct 2022 | 29 Oct 2022 | 5 | 29 Oct 2022 |
| Sprint-2 | 2 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 2 | 05 Nov 2022 |

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|----------|--------------------|----------|-------------------|---------------------------|---|------------------------------|
| Sprint-3 | 5 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 5 | 12 Nov 2022 |
| Sprint-4 | 5 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 5 | 19 Nov 2022 |

Velocity:

The team's average velocity (AV) per iteration unit (story points per day) :

Sprint 1: $AV = \text{Sprint duration} / \text{velocity} = 5/6 = 0.87$

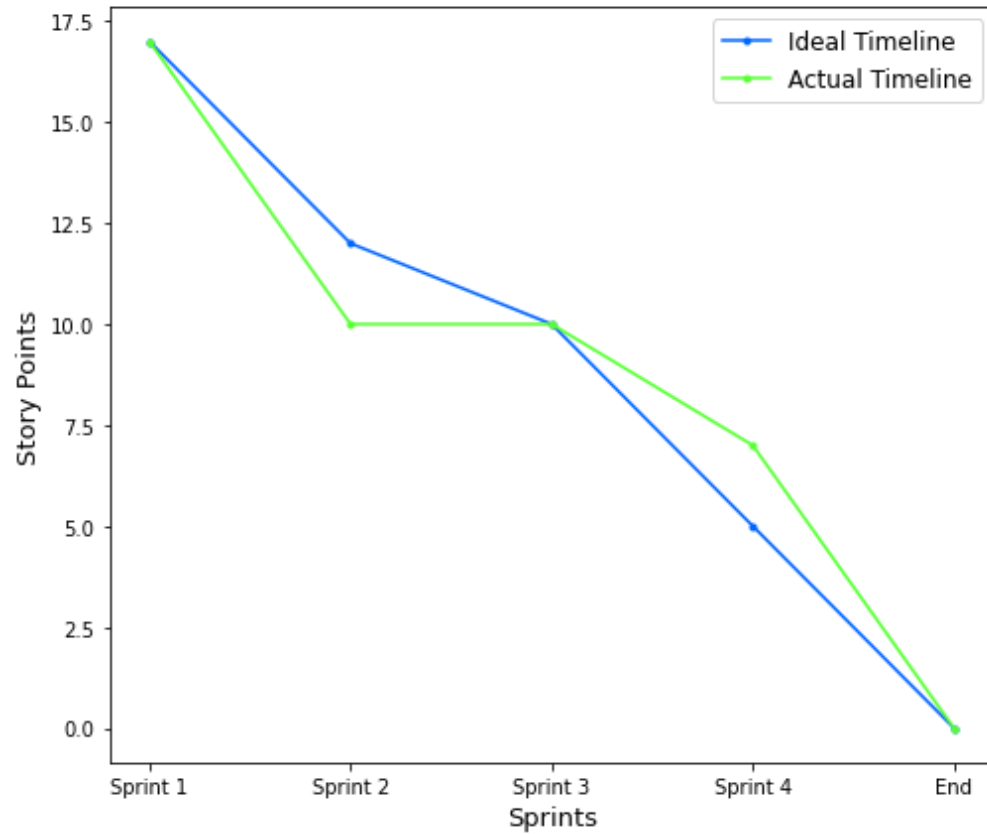
Sprint 2: $AV = \text{Sprint duration} / \text{velocity} = 2/6 = 0.34$

Sprint 3: $AV = \text{Sprint duration} / \text{velocity} = 5/6 = 0.87$

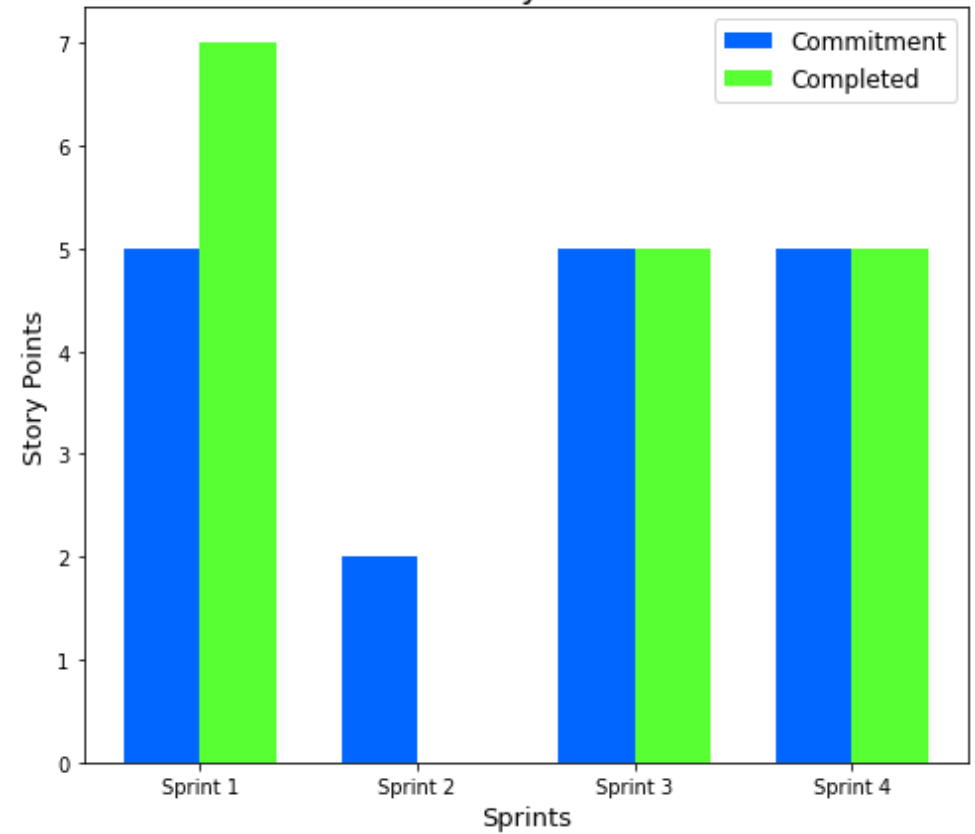
Sprint 4: $AV = \text{Sprint duration} / \text{velocity} = 5/6 = 0.87$

6.3 Reports from JIRA

Burndown Chart



Velocity Chart



7. CODING & SOLUTIONING (Explain the features added in the project along with code)

7.1 Feature 1

An interactive dashboard has been embedded into our web page.

Code :

```
<iframe  
src="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FGlobal%2BSuperstore%  
2BDashboard&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&  
action=view&mode=dashboard"      width="100%"      height="800"      frameborder="0"      gesture="media"  
allow="encrypted-media" allowfullscreen=""></iframe>
```

8. TESTING

8.1 Test Cases

| Test case ID | Feature Type | Component | Test Scenario | Pre-Requisite | Steps To Execute | Expected Result | Actual Result | Status | Comments | TC for Automation (Y/N) | BUG ID | Executed By |
|------------------|--------------|-----------|--|---|--|---|---------------------|--------|----------|-------------------------|--------|----------------------------|
| Dashboard_TC_001 | UI | Home Page | Verify user is able to see elements on the home page | User should have good internet connectivity | Enter the web page | UI elements of the home page are visible, such as: - Hero banner - Web page intro - Header | Working as expected | Pass | - | N | - | Atif, Rohith, Hamza, Tahir |
| Dashboard_TC_002 | Functional | Home Page | Verify the user is able to interact with elements in the home page | User should have good internet connectivity | User should be able to click the functional buttons and view the animated illustrations | User could see the UI and interact with various button and elements in the web page | Working as expected | Pass | - | N | - | Atif, Rohith, Hamza, Tahir |
| Dashboard_TC_003 | Functional | Home page | Verify the user is able to interact with the drop down elements on the home page | User should have good internet connectivity | Step 1 : Scroll down the Services section Step 2 : Click on the various drop down elements | User is able to interact with the drop down elements on the home page | Working as expected | Pass | - | N | - | Atif, Rohith, Hamza, Tahir |
| Dashboard_TC_004 | Functional | Home page | Verify the user is able to enter details in the Contact Us section | User should have good internet connectivity | Step 1 : Scroll down or Click on the Contact Us button present in the header Step 2 : Fill in your data in the form | User is able to fill in their data into to the Contact Us form | Working as expected | Pass | - | N | - | Atif, Rohith, Hamza, Tahir |
| Dashboard_TC_005 | UI | Home page | Verify the user is able to view the Dashboard in the Portfolio section | User should have good internet connectivity | Step 1 : Scroll down to the Portfolio section Step 2 : View the cognos dashboard present | User is able to view the UI of the dashboard | Working as expected | Pass | - | N | - | Atif, Rohith, Hamza, Tahir |

| | | | | | | | | | | | | |
|------------------|------------|----------------|--|---|---|--|---------------------|------|--|---|---|----------------------------|
| Dashboard_TC_006 | Functional | Home page | Verify the user is able to interact with the Dashboard | User should have good internet connectivity | Interact with various visualizations present in the dashboard | User can interact and direct to the cognos dashboard where they can view various visualizations and analysis | Working as expected | Pass | Various visual charts could be viewed in the dashboard | N | - | Atif, Rohith, Hamza, Tahir |
| Dashboard_TC_007 | Functional | Home page | Verify the user is able to click on the Portfolio link which leads them to a second page | User should have good internet connectivity | Click on the hyperlink to go to the Portfolio page | User is able to click on the Portfolio link which leads them to a second page | Working as expected | Pass | - | N | - | Atif, Rohith, Hamza, Tahir |
| Dashboard_TC_008 | UI | Portfolio page | Verify the user is able to view the elements on the Portfolio page | User should have good internet connectivity | er the Portfolio p | User is able to view the UI elements on the Portfolio page | Working as expected | Pass | - | N | - | Atif, Rohith, Hamza, Tahir |
| Dashboard_TC_009 | UX | Portfolio page | Verify the user is able to interact with the elements in the Portfolio page | User should have good internet connectivity | User should be able to click the functional buttons and view the animated illustrations | User could see the UI and interact with various button and elements in the web page | Working as expected | Pass | - | N | - | Atif, Rohith, Hamza, Tahir |
| Dashboard_TC_010 | UI/UX | Portfolio page | Verify the user is able to view the Dashboard | User should have good internet connectivity | Step 1 : Scroll down to the Portfolio section Step 2 : View the cognos dashboard present | User is able to view the UI of the dashboard | Working as expected | Pass | Various visual charts could be viewed in the dashboard | N | - | Atif, Rohith, Hamza, Tahir |
| Dashboard_TC_011 | Functional | Portfolio page | Verify the user is able to interact with the Dashboard | User should have good internet connectivity | Interact with various visualizations present in the dashboard | User can interact and direct to the cognos dashboard where they can view various visualizations and analysis | Working as expected | Pass | - | N | - | Atif, Rohith, Hamza, Tahir |

8.2 User Acceptance Testing

1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the Global Sales Data Analytics project at the time of the release to User Acceptance Testing (UAT).

2. Defect Analysis

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

| Resolution | Severity 1 | Severity 2 | Severity 3 | Severity 4 | Subtotal |
|----------------|------------|------------|------------|------------|----------|
| By Design | 0 | 0 | 0 | 0 | 0 |
| Duplicate | 0 | 0 | 0 | 0 | 0 |
| External | 0 | 0 | 0 | 0 | 0 |
| Fixed | 0 | 0 | 0 | 0 | 0 |
| Not Reproduced | 0 | 0 | 0 | 0 | 0 |
| Skipped | 0 | 0 | 0 | 0 | 0 |
| Won't Fix | 0 | 0 | 0 | 0 | 0 |
| Totals | 0 | 0 | 0 | 0 | 0 |

3. Test Case Analysis

This report shows the number of test cases that have passed, failed, and untested

| Section | Total Cases | Not Tested | Fail | Pass |
|--------------------|-------------|------------|------|------|
| Hero section | 4 | 0 | 0 | 4 |
| Contact Us Section | 1 | 0 | 0 | 1 |
| Drop down menus | 1 | 0 | 0 | 1 |
| Dashboard | 5 | 0 | 0 | 5 |

9. RESULTS

9.1 Performance Metrics

| S.No. | Parameter | Screenshot / Values |
|-------|---|------------------------------------|
| 1. | Dashboard design | No of Visualizations / Graphs - 29 |
| 2. | Data Responsiveness | Very responsive |
| 3. | Amount of Data to be Rendered (DB2 Metrics) | 11.5 MB (GlobalSuperstore2.csv) |
| 4. | Utilization of Data Filters | Utilized to full effectiveness |

| | | |
|----|----------------------|------------------------------------|
| 5. | Effective User Story | No of Scenes Added - 7 |
| 6. | Descriptive Reports | No of Visualizations / Graphs - 10 |

10. ADVANTAGES & DISADVANTAGES

Advantages

- Data Visualizations
- Ease of use
- Integration capabilities

Disadvantages

- No prediction features available as of yet
- Need to improve security aspect of the product

11. CONCLUSION

To conclude, we will say that we are providing revolutionary solutions and insights for businesses and making their job a lot easier.

12. FUTURE SCOPE

We can improve our services that we offer by implementing more prediction based insights. Also, we can further exploit other domains as well and offer analytics services to them.

13. APPENDIX

Source Code - <https://github.com/IBM-EPBL/IBM-Project-43167-1660713791/tree/main/Final%20Deliverables/Source%20Code>

GitHub - <https://github.com/IBM-EPBL/IBM-Project-43167-1660713791>

Project Demo - https://drive.google.com/file/d/191SB9_xgaxjc3sfxmp3mnczvpHgQyveC/view?usp=share_link