

REPORT ON DATA ANALYTICS & VISUALIZATION VIRTUAL INTERNSHIP AT ACCENTURE

Submitted in partial fulfillment of the requirements for the completion of

PROFESSIONAL TRAINING

By

MOHD NOMAN (Reg. No. 41140058)



**DEPARTMENT OF ELECTRICAL AND ELECTRONICS
ENGINEERING**

SCHOOL OF ELECTRICAL AND ELECTRONICS

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

Accredited with grade “A++” by NAAC

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI – 600119

OCTOBER 2023



**DEPARTMENT OF ELECTRICAL AND ELECTRONICS
ENGINEERING**

BONAFIDE CERTIFICATE

This is to certify that this Internship Report submitted for EPICS is the bonafide work of **MOHD NOMAN** (41140058) who carried out the **DATA ANALYTICS & VISUALIZATION** Virtual Internship during the period May 2023.

EXTERNAL GUIDE

HEAD OF THE DEPARTMENT

Dr. S . Radhika, M.E., (Ph.D.)

Submitted for Professional Training held on 04 October 2023

Internal Examiner

External Examiner

DECLARATION

I **MOHD NOMAN** hereby declare that the Internship Report Entitled **DATA ANALYTICS & VISUALIZATION** Virtual Internship done by me at **ACCENTURE** is submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering degree in **ELECTRICAL AND ELECTRONICS ENGINEERING**.

DATE: 12 May 23 - 19 May 24

PLACE: CHENNAI

A handwritten signature in black ink, appearing to read 'Mohd Noman', with a stylized, cursive script.

SIGNATURE OF THE CANDIDATE

MOHD NOMAN

ACKNOWLEDGEMENT

I am pleased to acknowledge My sincere thanks to the Board of Management of **SATHYABAMA** for their kind encouragement in doing this Internship project and for completing it successfully. We are grateful to them.

I convey our thanks to **Dr. N. M. Nandhita., Dean, School of Electrical and Electronics Engineering** and **Dr. S. Radhika, Head of the Department, Dept. of Electrical and Electronics Engineering** for providing us necessary support and details at the right time during the progressive reviews.

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TABLE OF CONTENTS

CHAPTER	TITLE	PAGE No.
1	INTRODUCTION ABOUT THE COMPANY	7
	1.1 MAIN PRODUCT OF THE COMPANY	8
	1.2 END USER OF THE COMPANY	10
2	DATA ANALYTICS & VISUALIZATION	13
	2.1 DATA ANALYTICS	13
	2.1.1 STEPS INVOLVED IN DATA ANALYTICS	13
	2.2 DATA VISUALIZATION	16
3	PROJECT UNDERSTANDING	17
	3.1 INDUSTRY PROJECT	18
	3.2 TASK ONE	19
	3.3 STATEMENT WHICH DESCRIBES THE BUSINESS PROBLEM	20
4	PROJECT CLEANING & MODELING	21
	4.1 LET'S DIVE INTO THE DATA	21
	4.2 DATA CLEANING	23
	4.3 DATA MODELLING	23
	4.4 TASK TWO	24
	4.4.1 END RESULT	24
5	DATA VISUALISATION & STORYTELLING	25
	5.1 BUILD PRESENTATION STRUCTURE	25
	5.2 CREATE CHARTS	26
	5.3 DATA VISUALIZATION EXPLAINED	29
	5.4 PRESENT TO THE CLIENT	29
	5.5 PRESENTATION TIPS	30
6	SUMMARY AND CONCLUSION	31
	6.1 KNOWLEDGE GAIN & EXPERIENCE	31
	6.2 INTERNSHIP COMPLETION CERTIFICATE	33
	REFERENCE	34

LIST OF FIGURES

FIG No.	TITLE	PAGE No.
1	Accenture Business Model Canvas	10
2	Steps Involved in Data Analytics	15
3	Data Visualization Dashboard	16
4	Internal Stakeholder Chart	20
5	Data Model	22
6	Reaction Types, Reaction & Content Data	23
7	Data Modeling Code	24
8	Presentation Slides	25
9	Cleaned Dataset For Analysis	27
10	Chart Visualization	28
11	Visualization Explained	29
12	Internship Completion Certificate	33

CHAPTER 1

INTRODUCTION ABOUT THE COMPANY

Accenture is a global leader in providing a wide range of professional services, including consulting, technology, strategy, and outsourcing solutions. Founded in 1989, the company has since grown into one of the world's largest and most influential management consulting and technology services firms. With its headquarters in Dublin, Ireland, and a strong presence in over 120 countries, Accenture boasts a diverse workforce of talented professionals who collaborate to deliver innovative solutions to some of the world's most complex business challenges. Accenture's core mission is to help organizations transform and thrive in an ever-evolving digital world. The company offers a comprehensive suite of services designed to address the unique needs of various industries, such as healthcare, financial services, consumer goods, and technology. This industry-focused approach enables Accenture to provide tailored solutions that drive tangible results for its clients. One of the cornerstones of Accenture's success is its commitment to innovation. The company invests heavily in research and development, staying at the forefront of emerging technologies like artificial intelligence, cloud computing, and data analytics. This dedication to innovation allows Accenture to help its clients harness the power of cutting-edge technology to improve their operations, enhance customer experiences, and drive growth. Accenture also places a strong emphasis on sustainability and corporate responsibility. The company is dedicated to making a positive impact on society and the environment through its operations and client engagements. It actively promotes diversity and inclusion within its workforce and works towards reducing its carbon footprint. In summary, Accenture is a global powerhouse in the field of consulting and technology services, renowned for its commitment to innovation, industry expertise, and dedication to positive societal impact. With its global reach and diverse team of experts, Accenture continues to shape the future of businesses worldwide.

1.1 MAIN PRODUCT OF THE COMPANY

Accenture is primarily a professional services firm that specializes in a wide range of offerings, and its main "product" is not a physical product but rather a suite of services aimed at helping organizations across various industries transform and succeed in the digital age. Below are some of the key services and solutions that represent Accenture's core offerings:

Consulting Services : Accenture's consulting services cover strategy, operations, and technology. They help businesses define their strategic vision, improve their operational efficiency, and navigate complex challenges.

Technology Services : This includes a wide range of technology-related solutions such as IT strategy, application development, cybersecurity, and cloud services. Accenture helps businesses leverage technology to streamline operations and gain a competitive edge.

Digital Transformation : Accenture assists organizations in embracing digital technologies to innovate their business models, enhance customer experiences, and optimize processes. This includes areas like digital strategy, data analytics, and user experience design.

Outsourcing Services : Accenture offers business process outsourcing (BPO) and information technology outsourcing (ITO) services to help clients reduce costs and improve the efficiency of their operations.

Managed Services : The company provides managed services for various IT functions, including infrastructure management and application maintenance, allowing clients to focus on their core business activities.

Industry-Specific Solutions : Accenture tailors its services to specific industries, such as healthcare, financial services, retail, and energy. These solutions address industry-specific challenges and opportunities.

AI and Analytics : Accenture harnesses the power of artificial intelligence and advanced analytics to help clients derive valuable insights from data, make data-driven decisions, and enhance their competitive advantage.

Security Services : With the increasing importance of cybersecurity, Accenture offers a range of services to help clients protect their digital assets and sensitive information from threats and vulnerabilities.

Sustainability and Corporate Responsibility : Accenture helps organizations develop and implement sustainability strategies, reducing their environmental impact and contributing to corporate responsibility goals.

Training and Talent Development : The company invests in training and talent development programs to equip its workforce with the latest skills and knowledge required to address evolving business and technology challenges.

In essence, Accenture's main "product" is its expertise and capability to deliver customized solutions that enable organizations to adapt, innovate, and thrive in a rapidly changing business landscape. It leverages technology, industry insights, and a global network of professionals to help clients achieve their strategic goals and stay competitive in today's dynamic marketplace.

accenture - Business Model Canvas

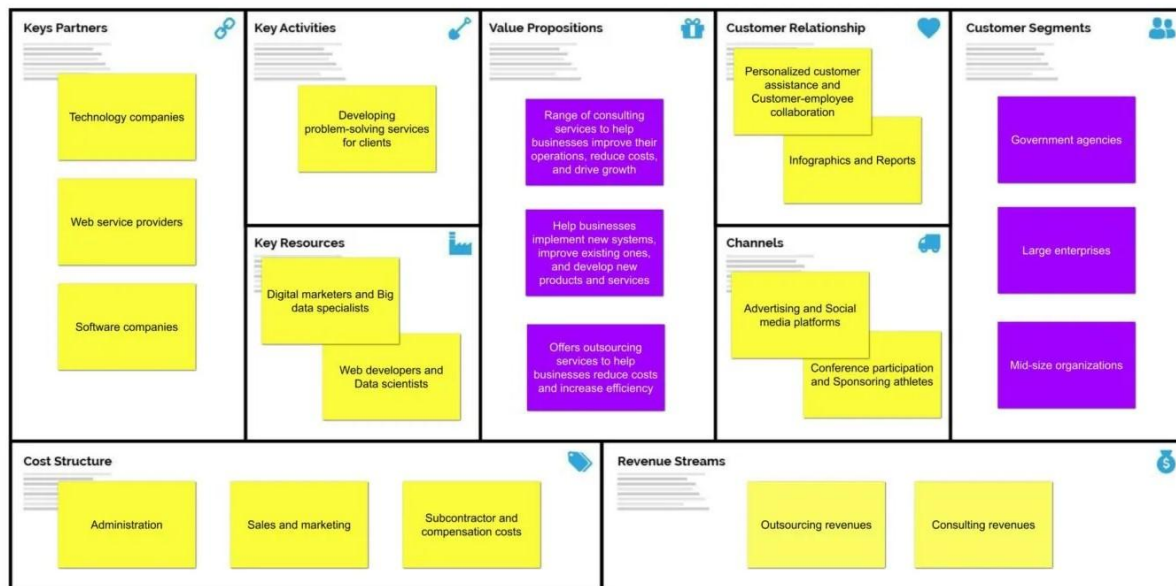


FIG.1 Accenture Business Model Canvas

1.2 END USER OF THE COMPANY

Accenture's extensive portfolio of services caters to a diverse range of end users across various industries and sectors. Here's a more detailed look at the end users of the company:

Enterprises and Corporations : Accenture primarily serves large and mid-sized enterprises across industries such as healthcare, financial services, retail, technology, and more. These businesses engage with Accenture to address complex challenges, implement technology solutions, enhance operational efficiency, and drive digital transformation. Accenture's consultancy and technology services are instrumental in helping these organizations remain competitive and agile in a rapidly changing business landscape.

Government Entities : Government agencies at the local, state, and federal levels are important end users of Accenture's services. They turn to Accenture for support in modernizing their operations, implementing digital government initiatives, improving citizen services, and leveraging data analytics for better decision-making. Accenture's expertise helps government bodies become more efficient and responsive to the needs of their constituents.

Non-Profit Organizations : Non-profit organizations partner with Accenture to leverage its consulting and technology services to achieve their missions more effectively. Whether it's optimizing their operations, expanding their outreach, or enhancing their impact, nonprofits benefit from Accenture's expertise in strategy, technology, and data-driven insights.

Healthcare Providers : Hospitals, healthcare systems, pharmaceutical companies, and healthcare-related organizations are key end users of Accenture's services. They seek assistance in improving patient care, adopting digital healthcare solutions, navigating complex regulatory requirements, and optimizing healthcare delivery. Accenture plays a vital role in transforming the healthcare industry to be more patient-centric and efficient.

Financial Institutions : Banks, insurance companies, and other financial institutions rely on Accenture to address their unique challenges. This includes enhancing digital banking services, improving risk management, streamlining operations, ensuring compliance with regulations, and bolstering cybersecurity defenses. Accenture's services help financial organizations adapt to evolving market dynamics.

Retail and Consumer Goods Companies : Retailers and consumer goods companies partner with Accenture to navigate the rapidly changing retail landscape. They seek assistance in developing e-commerce strategies, optimizing supply chain operations, personalizing customer experiences, and harnessing data analytics to

make informed decisions. Accenture helps these businesses stay competitive in the digital era.

Energy and Utility Companies : Energy and utility companies turn to Accenture for assistance in managing their operations efficiently, adopting renewable energy technologies, addressing sustainability concerns, and navigating the complex energy landscape. Accenture plays a crucial role in helping these organizations transition to a more sustainable future.

Technology Companies : Technology firms engage with Accenture to enhance their product and service offerings. Accenture provides services like software development, cloud migration, digital marketing, and cybersecurity solutions to help technology companies expand their market reach, improve customer experiences, and innovate in the fast-paced tech industry.

Individual Consumers : While Accenture primarily serves businesses and organizations, its solutions often indirectly benefit individual consumers. For example, by helping retailers create better online shopping experiences, improving healthcare services, or enhancing the efficiency of government services, Accenture contributes to the overall quality of life for individuals.

Employees and Talent : Accenture's employees are also end users in a sense. They benefit from the company's extensive training and development programs, opportunities for career growth, and a dynamic work environment. Accenture values its employees as an essential asset in delivering high-quality services to clients.

In conclusion, Accenture's services are wide-ranging and adaptable to the unique needs of a broad array of end users, encompassing businesses, governments, non-profits, healthcare providers, financial institutions, consumers, and its own workforce. The company's expertise and innovation play a pivotal role in driving

positive transformations in these sectors, ultimately impacting the lives of individuals and the success of organizations worldwide.

CHAPTER 2

DATA ANALYTICS AND VISUALIZATION

Data analytics and visualization are critical components of the modern data-driven decision-making process.

2.1 DATA ANALYTICS

involves examining and interpreting large datasets to extract valuable insights. It encompasses various techniques such as statistical analysis, machine learning, and data mining to uncover patterns, trends, and correlations in data. By applying data analytics, organizations can make informed decisions, predict future outcomes, optimize processes, and identify opportunities for growth.

2.1.1 STEPS INVOLVED IN DATA ANALYTICS

Deployment : in data analytics refers to the process of implementing and making practical use of data-driven insights and models within an organization's operations or systems. After data analysis and model development, deployment ensures that the results are integrated into decision-making processes, software applications, or automated systems. It involves translating analytical findings into actionable steps, often involving the integration of algorithms, dashboards, or reports into an organization's workflow to enable data-driven decision-making, improve processes,

and drive business outcomes. Successful deployment is a crucial step to realize the value of data analytics in real-world applications.

Business understanding : in data analytics refers to the in-depth comprehension of an organization's goals, operations, and industry context. It involves recognizing the specific challenges and opportunities within the business domain, defining clear objectives for data analysis, and aligning analytical efforts with strategic priorities. A strong business understanding allows data analysts to formulate relevant questions, select appropriate data sources, and develop insights and recommendations that directly address the needs of the business. It ensures that data analytics efforts are not only technically sound but also provide actionable insights that drive business value and informed decision-making.

Data exploration : in data analytics involves the initial investigation and analysis of a dataset to understand its characteristics. This process includes examining data through visualization, summary statistics, and data profiling techniques. By visualizing data patterns and trends, calculating basic statistics, and assessing data quality, analysts gain insights that guide subsequent data analysis steps. Data exploration is crucial for identifying outliers, formulating hypotheses, and making informed decisions about data preprocessing and modeling, ultimately enhancing the effectiveness and reliability of data-driven insights.

Data preparation : in data analytics is the process of cleaning, transforming, and organizing raw data to make it suitable for analysis. This involves handling missing values, removing duplicates, standardizing data formats, and encoding categorical variables. Data preparation ensures data quality, consistency, and compatibility with analytical tools and models. It is a critical step because the accuracy and reliability of insights derived from data analysis depend on the quality and suitability of the prepared data.

Data modeling : in data analytics involves the creation of mathematical or computational representations of real-world data. It encompasses various techniques, such as statistical models, machine learning algorithms, and mathematical equations, to capture patterns, relationships, and insights within data. These models are used to make predictions, classify data, identify trends, or generate recommendations. Data modeling helps analysts and data scientists extract valuable information from raw data, enabling data-driven decision-making and solving complex problems in diverse domains like finance, healthcare, marketing, and more.

Data evaluation : in data analytics is the process of assessing the quality, effectiveness, and relevance of the results produced by data models and analyses. It involves scrutinizing the model's performance metrics, examining the accuracy of predictions or insights, and validating whether the outcomes align with the business objectives or research goals. Data evaluation helps analysts and data scientists determine if the model meets the desired criteria and if any adjustments or improvements are necessary to enhance the reliability and usefulness of the data-driven outcomes.

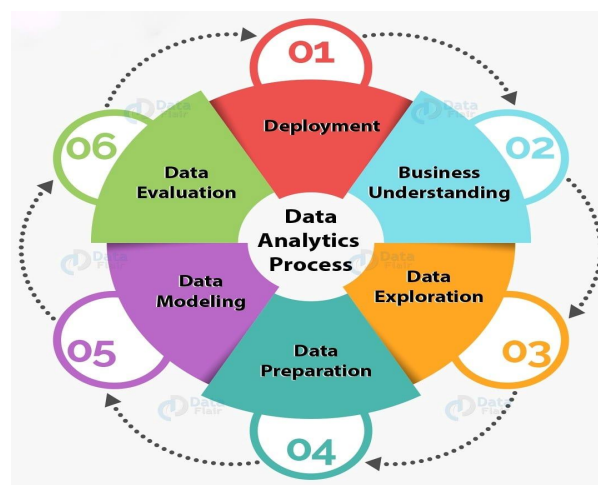


FIG. 2 STEPS INVOLVED IN DATA ANALYTICS

2.2 DATA VISUALIZATION

complements data analytics by presenting data in a visual format, such as charts, graphs, and dashboards. Visualization makes complex data more accessible and understandable, allowing stakeholders to grasp information quickly. Effective data visualization enhances communication, aids in spotting anomalies or trends, and supports the storytelling of data-driven insights. Tools like Tableau, Power BI, and Python libraries like Matplotlib and Seaborn are commonly used for data visualization.

Together, data analytics and visualization empower businesses and individuals to turn raw data into actionable knowledge. They play a pivotal role in fields like business intelligence, healthcare, finance, marketing, and more, enabling data-driven decision-makers to drive innovation, solve problems, and stay competitive in today's data-rich environment.

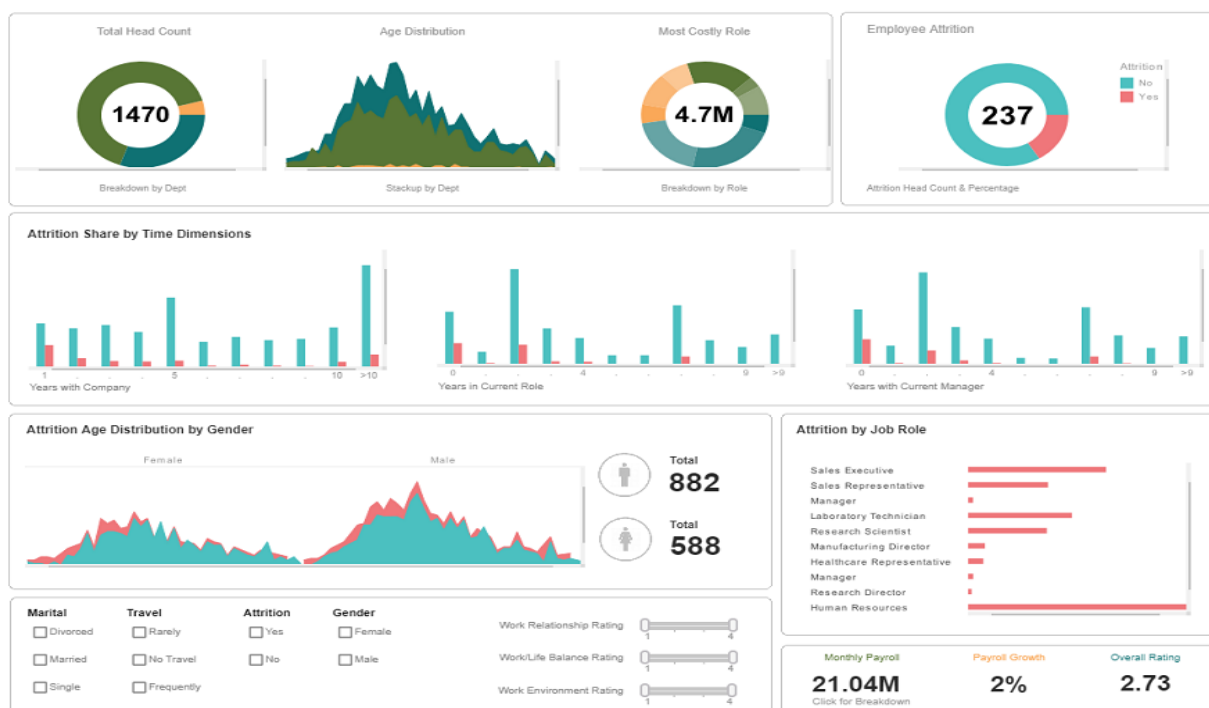


FIG. 3 DATA VISUALIZATION DASHBOARD

CHAPTER 3

PROJECT UNDERSTANDING

Project understanding in data analytics involves gaining a comprehensive grasp of the objectives, scope, and requirements of a data analysis project. This phase includes:

Defining Goals : Identifying the specific questions or problems the analysis aims to address and outlining the expected outcomes.

Data Needs : Determining the data sources, types, and volumes required to answer the project's questions and achieve its objectives.

Scope and Constraints : Understanding project constraints, including time, budget, and resource limitations, and defining the project's boundaries.

Stakeholder Alignment : Ensuring alignment with stakeholders' expectations and objectives to guarantee that the analysis serves their needs.

Risk Assessment : Identifying potential challenges and risks that may affect project success.

A clear project understanding sets the foundation for effective data collection, analysis, and interpretation, ensuring that the analysis aligns with business or research goals.

3.1 INDUSTRY PROJECT

Client name : Social Buzz

Client industry : Social media & content creation

Year established : 2010

Location of HQ : San Francisco

Number of employees : 250

Client background : Social Buzz was founded by two former engineers from a large social media conglomerate, one from London and the other from San Francisco. They left in 2008 and both met in San Francisco to start their business. They started Social Buzz because they saw an opportunity to build on the foundation that their previous company started by creating a new platform where content took center stage. Social Buzz emphasizes content by keeping all users anonymous, only tracking user reactions on every piece of content. There are over 100 ways that users can react to content, spanning beyond the traditional reactions of likes, dislikes, and comments. This ensures that trending content, as opposed to individual users, is at the forefront of user feeds.

Over the past 5 years, Social Buzz has reached over 500 million active users each month. They have scaled quicker than anticipated and need the help of an advisory firm to oversee their scaling process effectively.

Due to their rapid growth and digital nature of their core product, the amount of data that they create, collect and must analyze is huge. Every day over 100,000 pieces of content, ranging from text, images, videos and GIFs are posted. All of this data is highly unstructured and requires extremely sophisticated and expensive technology to manage and maintain. Out of the 250 people working at Social Buzz, 200 of them are technical staff working on maintaining this highly complex technology.

Up until this point, they have not relied on any third party firms to help them get to where they are. However there are 3 main reasons why they are now looking at bringing in external expertise:

- 1) They are looking to complete an IPO by the end of next year and need guidance to ensure that this goes smoothly.
- 2) They are still a small company and do not have the resources to manage the scale that they are currently at. They could hire more people, but they want an experienced practice to help instead.
- 3) They want to learn data best practices from a large corporation. Due to the nature of their business, they have a massive amount of data so they are keen on understanding how the world's biggest companies manage the challenges of big data.

To start our engagement with Social Buzz, we are running a 3 month initial project in order to prove to them that we are the best firm to work with. They are expecting the following:

- An audit of their big data practice
- Recommendations for a successful IPO
- An analysis of their content categories that highlights the top 5 categories with the largest aggregate popularity

3.2 TASK ONE

- Creation of an up-to-date big data best practices presentation
- Extraction of sample data sets using SQL
- On-site audit of their data-center - Merging of sample data set tables
- Virtual session with Social Buzz team to present previous client success stories relevant to them
- Preparation of best practice document for IPO
- Loading of sample data sets into Accenture sandbox database

- Technology architecture workshop with Social Buzz Data Team to understand their technology landscape
- Stress testing of their technology to identify weak spots
- Communication with previous IPO companies within our client base for reference stories
- Analysis of sample data sets with visualizations
- Full documentation of the process that we can guide them through for IPO

3.3 STATEMENTS WHICH DESCRIBES THE BUSINESS PROBLEM

1. The client has reached a massive scale within recent years and does not have the resources internally to handle it.

2. Audit of big data practice, recommendations for IPO, analysis of popular content

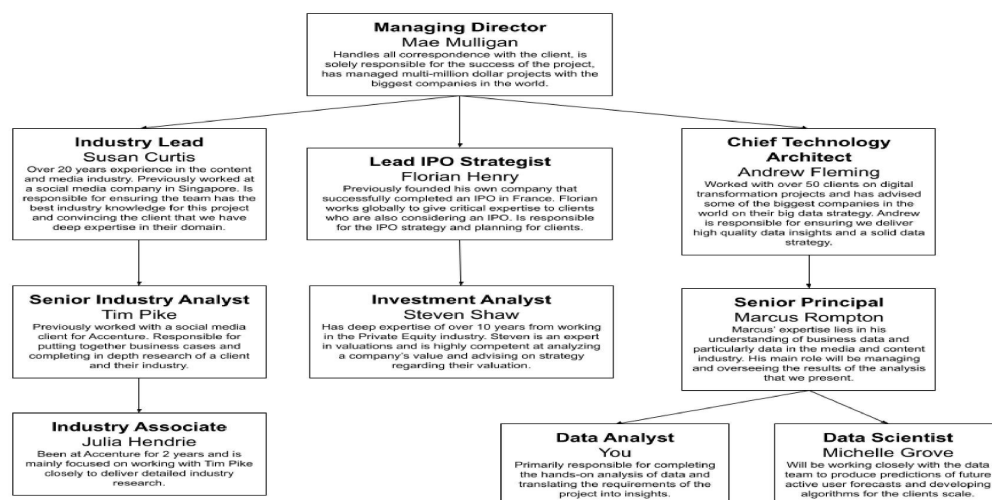


FIG. 4 INTERNAL STAKEHOLDER CHART

CHAPTER 4

PROJECT CLEANING AND MODELING

Project cleaning in data analytics involves identifying and resolving data quality issues such as missing values, duplicates, and outliers to ensure data accuracy. It prepares the dataset for analysis.

Data modeling is the phase where analytical models, algorithms, or statistical techniques are applied to the cleaned data. This step aims to extract patterns, relationships, and insights from the data to make predictions or inform decision-making. It's a critical part of deriving actionable insights from raw data in data analytics projects.

4.1 LET'S DIVE INTO THE DATA

Now you have a good understanding of the project and your role - it's time to get to work!

Don't worry if you haven't done data analysis before, we'll take you through each step and provide support along the way.

So, let's have a look at what data you have to work with. The client has sent through:

- **7 data sets** - each data set contains different columns and values
- **A data model** - this shows the relationships between all of the data sets, as well as any links that you can use to merge tables.

There is a lot of information here and it's easy to get lost in the data. So, to make sure you are using the right data to answer the business questions you'll follow these steps:

1. Requirements gathering
2. Data cleaning
3. Data modeling

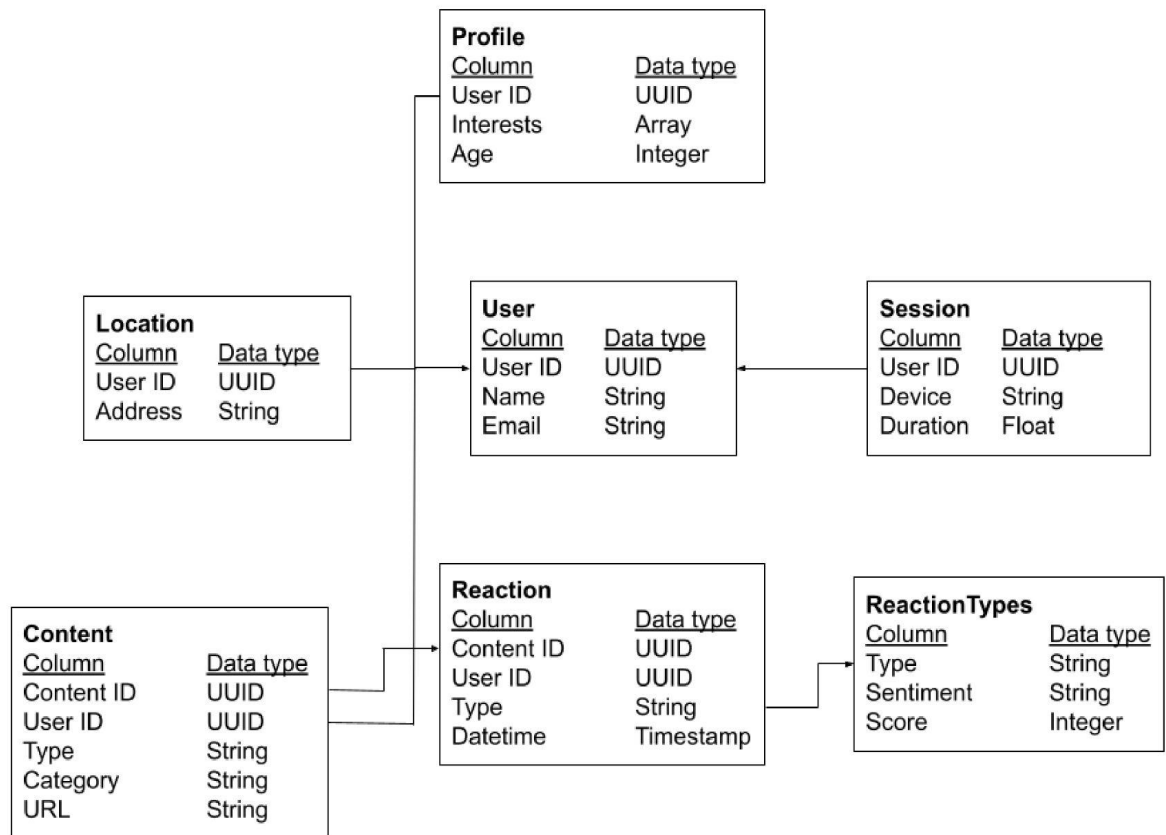


FIG. 5 DATA MODEL

4.2 DATA CLEANING

Data cleaning is a common and very important task when working with data.

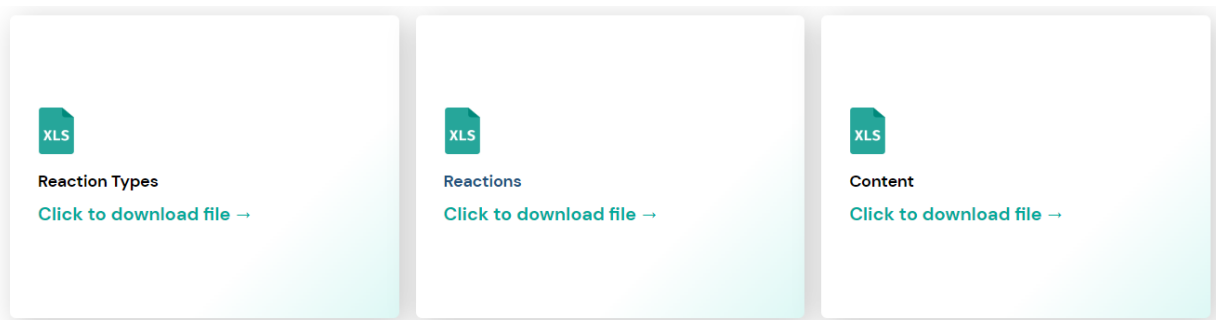


FIG. 6 REACTION TYPES, REACTIONS, CONTENT DATA

removing rows that have values which are missing, changing the data type of some values within a column, and removing columns which are not relevant to this task. Think about how each column might be relevant to the business question you're investigating. If you can't think of why a column may be useful, it may not be worth including it.

4.3 DATA MODELLING

Now we want to figure out the top 5 categories. To complete your data modeling, follow these steps:

1. Create a final data set by merging your three tables together
 - We recommend using the Reaction table as your base table, then first join the relevant columns from your Content data set, and then the Reaction Types data set.

CHAPTER 5

DATA VISUALIZATION & STORYTELLING

Data visualization is the graphical representation of data to help people understand and interpret complex information. It uses charts, graphs, and visual elements to convey patterns, trends, and insights effectively.

Data storytelling is the art of using data to tell a compelling narrative. It combines data visualization with context and explanation to communicate data-driven insights in a way that is engaging and meaningful to the audience. This approach enhances understanding and decision-making by making data more accessible and impactful.

5.1 BUILDING PRESENTATION STRUCTURE

Importantly, before you start creating your data charts, you should plan your presentation structure. This will ensure your presentation answers the right questions.

Here is a template that we would use at Accenture to create a presentation. You need to download this template and populate slides 2-6.

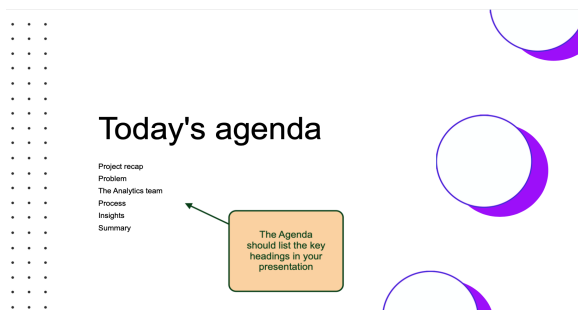


FIG. 8 PRESENTATION SLIDE

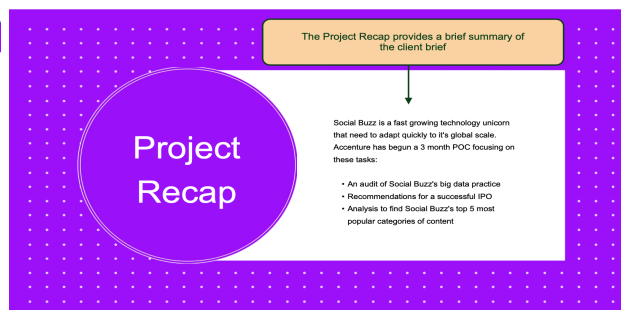


FIG. 8.1 PRESENTATION SLIDE

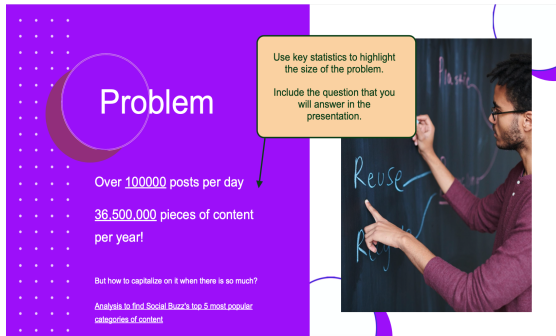


FIG. 8.2 PRESENTATION SLIDE

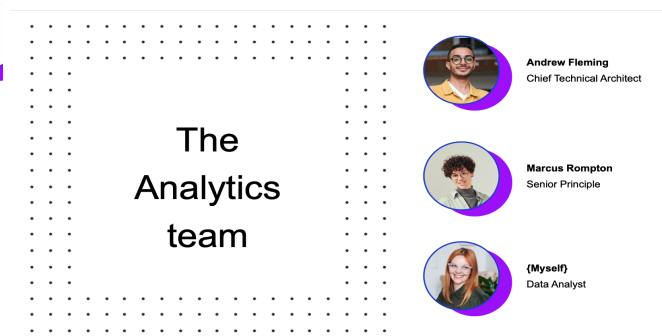


FIG. 8.3 PRESENTATION SLIDE

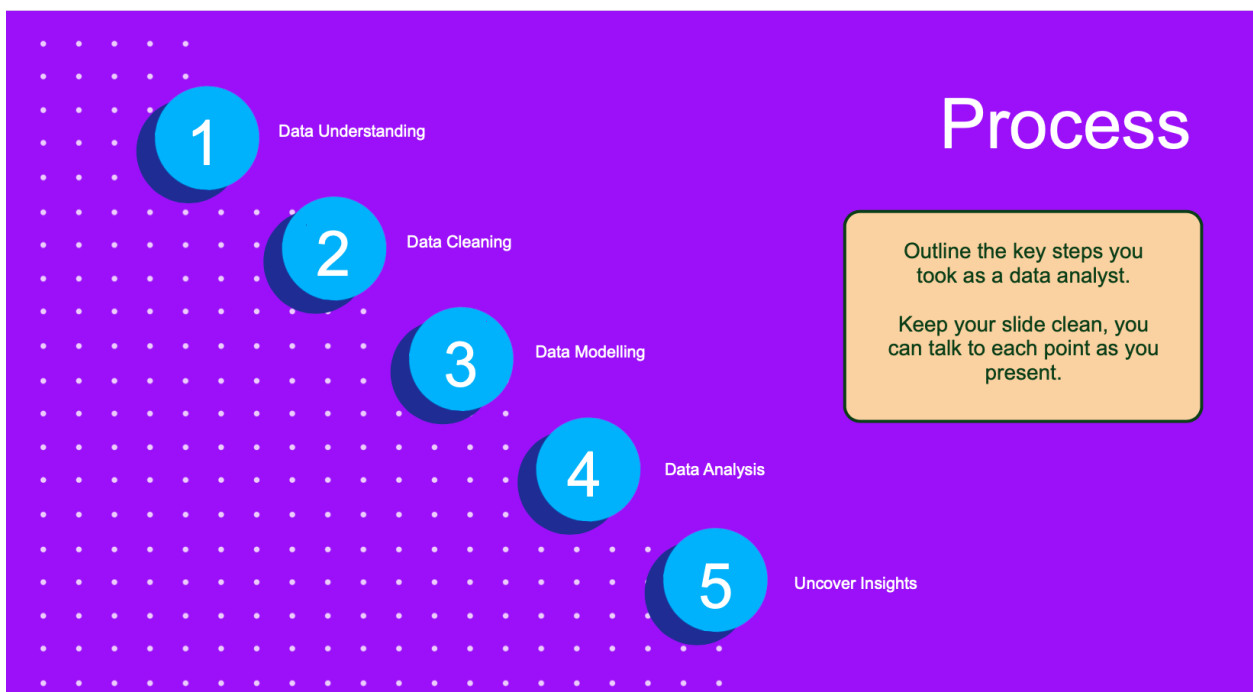


FIG. 8.4 PRESENTATION SLIDE

5.2 CREATE CHARTS

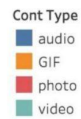
Charts in data analytics are graphical representations used to visually convey information from datasets. They simplify complex data by presenting it in a more understandable and interpretable format. Common types of charts include bar

charts, line charts, pie charts, scatter plots, histograms, and more. Each type is chosen based on the data and the specific insights to be conveyed. Charts play a vital role in summarizing data, revealing patterns, and making data-driven decisions more accessible to a broader audience.

	Content ID	Reaction Ty	Datetime	Content Typ	Category	Sentiment	Score	
0	97522e57-d	disgust	#####	photo	studying	negative	0	
1	97522e57-d	dislike	17/6/21 12:	photo	studying	negative	10	
2	97522e57-d	scared	18/4/21 5:1	photo	studying	negative	15	
3	97522e57-d	disgust	#####	photo	studying	negative	0	
4	97522e57-d	interested	23/8/20 12:	photo	studying	positive	30	
5	97522e57-d	peeking	#####	photo	studying	neutral	35	
6	97522e57-d	cherish	#####	photo	studying	positive	70	
7	97522e57-d	hate	27/1/21 8:3	photo	studying	negative	5	
8	97522e57-d	peeking	#####	photo	studying	neutral	35	
9	97522e57-d	love	#####	photo	studying	positive	65	
10	97522e57-d	indifferent	#####	photo	studying	neutral	20	
11	97522e57-d	scared	#####	photo	studying	negative	15	
12	97522e57-d	interested	#####	photo	studying	positive	30	
13	97522e57-d	hate	#####	photo	studying	negative	5	
14	97522e57-d	scared	#####	photo	studying	negative	15	
15	97522e57-d	super love	24/2/21 5:0	photo	studying	positive	75	
16	97522e57-d	peeking	23/9/20 6:2	photo	studying	neutral	35	
17	97522e57-d	indifferent	24/2/21 11:	photo	studying	neutral	20	
18	97522e57-d	interested	22/5/21 19:	photo	studying	positive	30	
19	97522e57-d	intrigued	31/1/21 16:	photo	studying	positive	45	
20	97522e57-d	peeking	20/11/20 17	photo	studying	neutral	35	
21	97522e57-d	worried	#####	photo	studying	negative	12	
22	97522e57-d	like	13/6/21 16:	photo	studying	positive	50	
23	97522e57-d	heart	#####	photo	studying	positive	60	

FIG. 9 CLEANED DATASET FOR ANALYSIS

Popularity: Content Types and Reaction Types



Media Type	Score (approx.)
photo	250K
video	235K
GIF	225K
audio	215K

Age (bin)	Content
10	100
15	105
20	95
25	105
30	90
35	110
40	105

Category	Score
animals	75K
science	72K
healthy eating	70K
technology	68K
food	65K

Category

Sentiment

- negative
- neutral
- positive

Count of Content ID

Category	positive	neutral	negative
animals	1050	250	400
science	1050	250	400
healthy eating	1050	250	400
food	1050	250	400
technology	1050	250	400
culture	1050	250	400
ranking	1050	250	400

The figure consists of three vertically stacked line charts sharing a common x-axis labeled 'Week of Datetime'. The x-axis has major ticks for 16 Aug 20, 8 Nov 20, 31 Jan 21, and 25 Apr 21.

- User Chart:** The y-axis is labeled 'User' with a scale from 0 to 200. The blue line starts at 119, rises sharply to over 200, and then fluctuates between 200 and 250, ending at 285.
- Content Chart:** The y-axis is labeled 'Content' with a scale from 0 to 400. The red line starts at 157, rises to 534, and then fluctuates between 350 and 450, ending at approximately 300.
- Avg. Duration Chart:** The y-axis is labeled 'Avg. Duration' with a scale from 20 to 40. The orange line starts at 50.299, dips to 44.948, and then remains relatively flat, fluctuating between 35 and 40.

28

5.3 DATA VISUALIZATION EXPLAINED

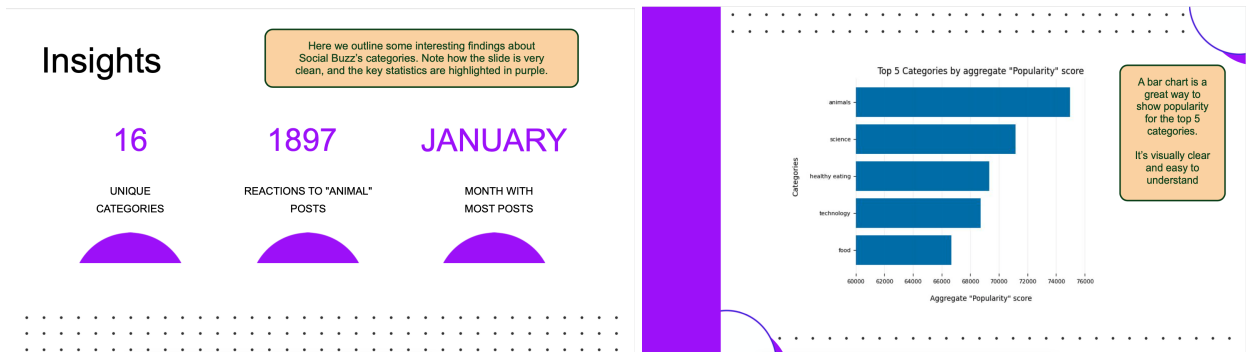


FIG. 11 VISUALIZATION EXPLAINED

FIG. 11.1 VISUALIZATION EXPLAINED

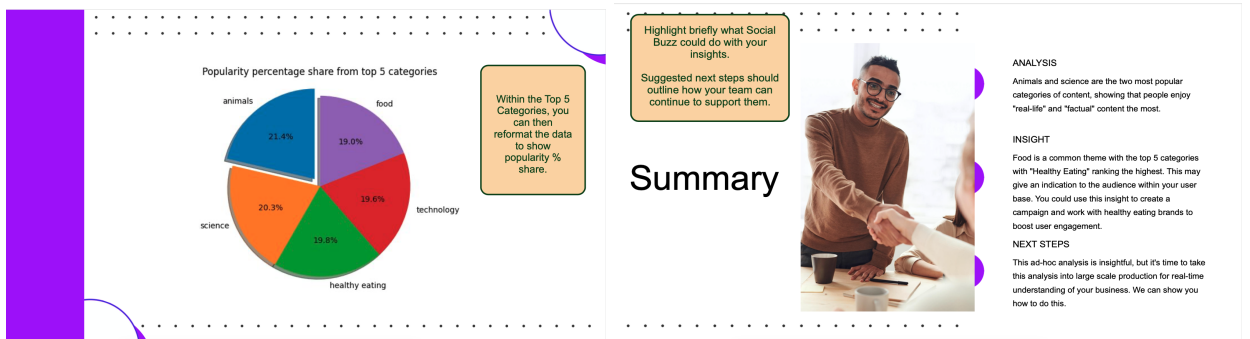


FIG. 11.2 VISUALIZATION EXPLAINED

FIG. 11.3 VISUALIZATION EXPLAINED

5.4 PRESENT TO THE CLIENT

Presenting to the client in data analytics involves communicating the results and insights derived from data analysis in a clear, concise, and compelling manner. This process typically includes:

Understanding the Audience : Tailoring the presentation to the client's level of technical expertise and specific needs. Visualizations: Using charts, graphs, and visuals to illustrate key findings and trends.

Narrative : Crafting a coherent and logical storyline that connects the analysis process to the insights and recommendations.

Key Takeaways : Highlighting the most important findings and their implications for the client's objectives.

Recommendations : Providing actionable recommendations based on the analysis.

Interactive Elements : If applicable, incorporating interactive elements or demonstrations to enhance understanding.

Q&A : Allowing time for client questions and discussions.

Effective client presentations in data analytics ensure that the client comprehends the value of the analysis and can use the insights to make informed decisions.

5.5 PRESENTATION TIPS

When presenting to the client there are a few things that you should remember:

1. They may not all be familiar with data, so you need to make sure you talk to them in business-friendly language.
2. You want to show them that you've understood their business and requirements, so use their terminology and language relevant to the task.
3. This is your time to shine and to show them how great you are! Try to present your work with confidence and conviction, if you don't feel confident talking about your results then it's a good indication that you don't understand them

fully or may need to revisit the dataset! Speaking about your results should feel natural when you explain what you've done.

4. A good presentation always takes a lot of preparation. The more you practice presenting your content, the more confident you will be when the time comes. Practice with your housemates, friends, family, anyone that is free! Ask for feedback and keep improving until you're happy with your presentation and you're confident in presenting your content.

CHAPTER 6

SUMMARY AND CONCLUSION

6.1 KNOWLEDGE GAIN AND EXPERIENCE

Teamwork in data analytics involves collaborative efforts among data professionals, including data analysts, data scientists, and domain experts. It encompasses sharing expertise, data, and insights, as well as effective communication and coordination. Team members work together to tackle complex problems, leverage diverse skills, and ensure data-driven projects' success. Effective teamwork enhances data analysis outcomes by incorporating different perspectives and skills, leading to more comprehensive and accurate insights.

Project planning in data analytics is the process of defining the scope, objectives, and strategies for a data analysis project. It includes setting clear goals, establishing timelines, allocating resources, and defining roles and responsibilities. A well-structured plan outlines data sources, methodologies, and tools to be used, ensuring that the project aligns with business or research objectives. Effective

project planning lays the groundwork for successful data analysis, enabling efficient execution and the attainment of desired outcomes.

Data understanding in data analytics involves acquiring, exploring, and getting familiar with the data that will be analyzed. This phase includes data collection, inspection, and preliminary exploration to identify its structure, quality, and potential issues. Analysts aim to comprehend the context, content, and relationships within the data, setting the foundation for subsequent data cleaning, modeling, and analysis. Gaining a thorough understanding of the data is crucial for meaningful insights and informed decision-making.

Public speaking in data analytics refers to the skill of effectively presenting data-driven insights to an audience. It involves conveying complex data findings in a clear, understandable, and engaging manner. Public speakers in data analytics must interpret statistical results, use data visualizations, and tell a compelling story to communicate findings and recommendations to stakeholders. Strong public speaking skills are vital for influencing decision-makers and ensuring that data insights drive informed actions within organizations.

6.2 INTERNSHIP COMPLETION CERTIFICATE

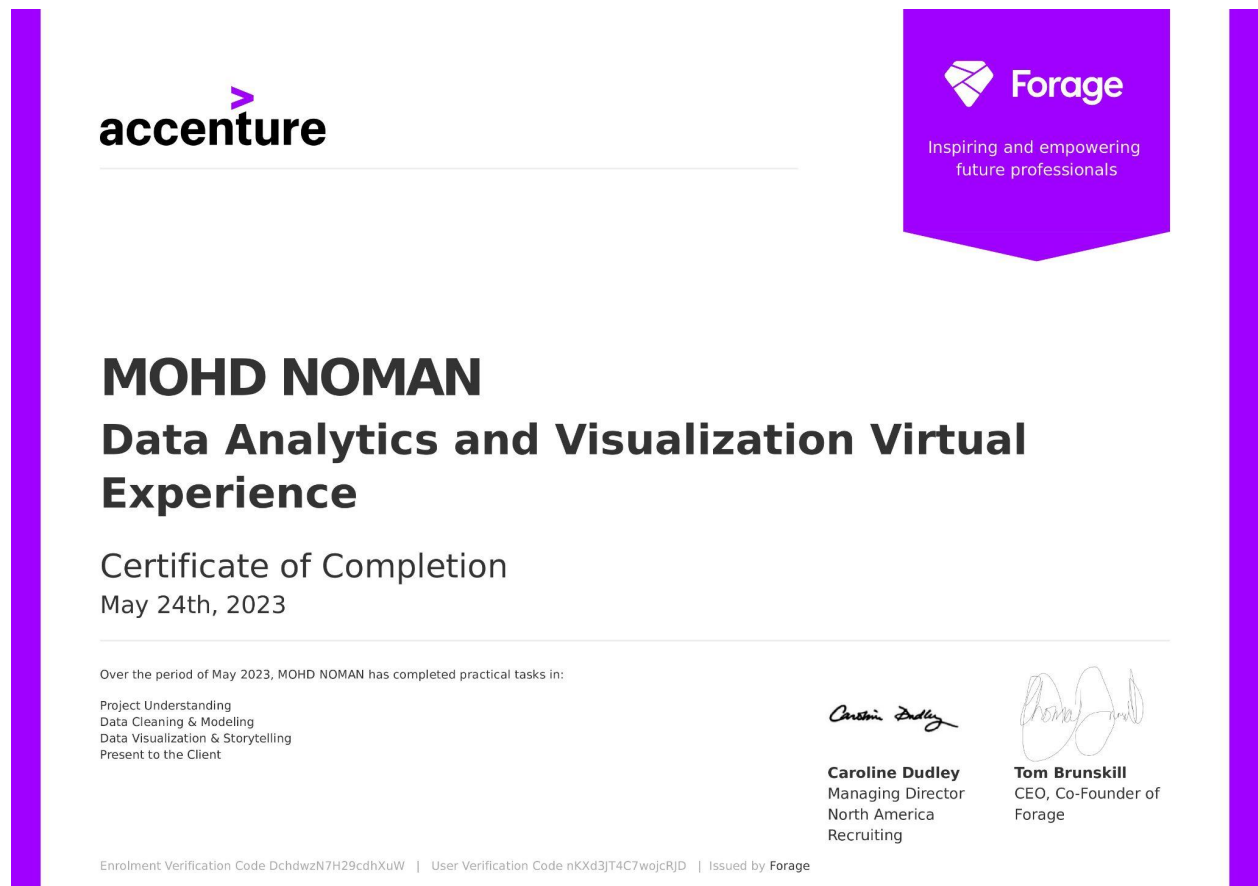


FIG. 12 INTERNSHIP COMPLETION CERTIFICATE

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