

**ANL201**

**Data Visualisation for Business**

**Tutor-Marked Assignment**

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1. **What is Microsoft’s Mission statement?**

Microsoft’s Mission statement is “to empower every person and every organization on the planet to achieve more”. They have the responsibility to ensure that the technology they develop offers the utmost comfort and benefits to everyone on this planet. Their tools and platforms help small businesses or start-ups to be more competitive, multinational, productive, effective, and more efficient. These tools and platforms help enhance education and healthcare outcomes, empower human creativity, and help people anywhere to grow.

**Links:** [https://www.microsoft.com/investor/reports/ar19/index.html#](https://www.microsoft.com/investor/reports/ar19/index.html)

1. **Microsoft did not explicitly mention their Vision statement. Based on the Shareholder Letter, discuss what Microsoft’s vision was for 2020 in your opinion.**

Customers use Microsoft technologies to find new opportunities and speed-up their digital transformations. Therefore, they developed and will further develop more innovative, intelligent, and complete solutions for their customers to simplify IT management and safeguard business processes. Their vision is to take the industry in several technological domains and experience sustained growth. Hence, they are investing their resources in:

* Developing and running cloud-based services in such a manner that businesses and individuals can benefit from new opportunities and experience
* Modifying the current workplace environment into state-of-art, new, and flexible business applications, helping people to improve their communication, collaboration, working, learning, and interaction with others.
* Creating new gaming experiences that enable people to play together on any devices and creating more entertainment with console and PC gaming.
* Charging Microsoft 365 strategy and could businesses using Windows and developing several new devices.
* Using Artificial Intelligence to understand customer insights, their needs, and acting on their behalf via the most typical communication method

**Links:** <https://www.sec.gov/Archives/edgar/data/789019/000156459019027952/msft-10k_20190630.htm>

1. **Explain Microsoft’s strategic themes. Name the strategic themes and provide a brief description of each of the strategic theme.**

Every customer wishes to have a partner that is directly aligned with the business’s success. No one desires to retain the relationship with a partner that sells their technology on one side and compete with customers on the other side. Microsoft has developed strategic themes that help customers to collaborate and work effectively with the public sector.

1. **Privacy**

Microsoft believes that privacy is every human’s fundamental right. Their approach towards data protection and privacy is based on the trust that Microsoft tools and platforms used by customers are built on privacy and they are the only holder of their own data. Microsoft defined privacy principles that ensure commitment:

* To provides several meaningful privacy options
* To carefully manage and regulate data that they store and process
* To be crystal-clear in privacy practices

1. **Cybersecurity**

In this technological era, cybersecurity has become an essential element for everyone. Microsoft processes more than 450 billion authentications out of 6.5 trillion signals every day and scans more than 400 billion emails for phishing and malware every month. Microsoft is the only company that provides end-to-end security to its customers. Moreover, they have brought commercial, non-commercial, and government sectors together to identify and coat cyberattacks and ensure a safe and secure digital environment.

1. **Responsible AI**

AI has become a buzzword these days. Microsoft’s one of the strategic themes include building responsible AI, following the principled approach of what computers should do and not what computers can do. Therefore, they have announced AI for Good initiative: AI for Cultural Heritage and AI for Humanitarian Action. Moreover, they are expanding their efforts in building AI for Accessibility and AI for Earth.

1. **Intelligent Cloud and Intelligent Edge**

As people are using the internet or cloud-based devices extensively, they expect a lot from IoT devices to respond to their commands in natural language, seamlessly integrate with other applications and meet all changing needs. Cloud-based devices and the internet are bringing the world closer.

Links: <https://neuralimpact.ca/blog/want-to-align-with-microsofts-2019-vision/>

1. **What are some of the challenges that may be faced in each of the four stages of data visualization process? Illustrate the answer with respect to the above case.**

Data Visualization implies representing any data or information graphically using charts, graphs, maps, etc.

**Challenges in Data Visualization Process**

1. **Data Oversimplification**

One of the significant challenges in the data visualization process is to collect a significant amount of data and convert it into its simplest and understandable form. Many times, collecting millions of data points and representing them in the pictorial form confinedly can lead to wrong assumptions or unfounded conclusions.

1. **The Human Limitations of Algorithms**

Human inputs to any algorithm are responsible for reducing data to visual illustrations. These human inputs basically include flaws. For instance, the specific algorithm may consist of all significant pieces of data and exclude other information entirely. However, this algorithm may not be suitable for all situations or companies.

1. **Overreliance on Visuals**

Overreliance on visuals is the most common problem faced by customers than developers. When people rely on data visuals to interpret it, they quickly start relying on those visuals for providing inputs. In other terms, users will never analyze data by digging deeply into it. Just with one glance at visuals, they jump to conclusions. Such conclusions may not be suitable for all situations.

**Links:** <https://www.datasciencecentral.com/profiles/blogs/4-potential-problems-with-data-visualization>

* 1. **Technical Skills**

For the data visualization process, one needs high technical skills. Moreover, for more complex and interactive trends for data visualization, high-level technical expertise are required to analyze, translate, and visualize the data. As there are fewer data scientists today, this can be a significant challenge in performing data visualization.

**Links:** <https://www.datasciencecentral.com/profiles/blogs/4-potential-problems-with-data-visualization>

1. **Identify at least two (2) interesting points from the data in Microsoft’s 2019 Annual Report. For each interesting point you discovered, summarise the data in your report, and explain why you think this point is interesting; discuss whether this point is good or bad to the company, and make recommendations accordingly.**

According to me, Artificial Intelligence and Intelligent Cloud are two interesting points from the Annual Report 2019.

1. **Artificial Intelligence**

Artificial Intelligence is defined as the intelligence that computer machines demonstrate. In other words, computer machines perform tasks that involve human intelligence. The vision of Microsoft for Artificial Intelligence is amplifying human creativity to solve the most significant and fundamental challenges of society using intelligent technology.

**AI For Good Initiative By Microsoft**

* **AI For Earth**

AI For Earth is one of the good initiatives by Microsoft to develop sustainable and innovative solutions for four different areas - agriculture, climate changes, biodiversity, and water. All these four areas play a crucial role in mankind’s future and the earth’s health.

**Link:** <https://www.microsoft.com/en-us/ai/ai-for-earth>

* **AI For Health**

People can make better and effective decisions if they have access to informative data. The objective of the AI for Health is to use data and Artificial Intelligence for improving the health of communities and people across the world and address major health challenges, like Covid-19.

**Link:** <https://www.microsoft.com/en-us/ai/ai-for-health>

* **AI For Humanitarian Action**

One of the best initiatives by Microsoft is AI For Humanitarian Actions. This initiative by Microsoft has raised $40 billion to support human rights, refugees, children’s and women’s needs, and displaced people, and disaster responses.

**Link:** <https://www.microsoft.com/en-us/ai/ai-for-humanitarian-action>

* **AI For Cultural Heritage**

Microsoft supports several organizations and people by investing in AI technology to conserve and preserve the cultural heritage across the world.

**Link:**

<https://www.microsoft.com/en-us/ai/ai-for-cultural-heritage#:~:text=AI%20for%20Cultural%20Heritage%20leverages,and%20enrichment%20of%20cultural%20heritage>.

Microsoft’s Artificial Intelligence is one of the trending and beneficial technologies, as it supports the planet, cultural heritage, women, children, and healthcare.

1. **Intelligent Cloud and Intelligent Edge**

Another interesting point for me in the Annual Report 2019 is Intelligent Cloud and Intelligent Edge. Cloud computing is the future of the world. The Intelligent cloud is a universal computing technology that uses Artificial Intelligence (AI), which can be used for any intelligent system. On the other hand, Intelligent Edge is the collection of devices and systems for collecting and analysing the data.

**Links:** <https://azure.microsoft.com/en-in/overview/future-of-cloud/>

The Intelligent Cloud involves three different cloud services and server products - public, private, and hybrid. There are two different segments in the Intelligent Cloud:

* **Server Products and Cloud Services**

Server products and cloud services include Windows Server, System Centre, Visual Studio SQL Server, GitHub, Azure, etc. All these server products enable IT professionals to become more effective and productive. The server software supports all software designed on the Windows Server Operating System.

* **Enterprise Services**

Enterprise Service helps individuals in creating, deploying, and monitoring Microsoft desktop and server solutions. Some enterprise services include Microsoft Consulting Services and Premier Support Services.