DATAGEEK

MBA-BUSINESS ANALYTICS

Volume 5 Issue 1
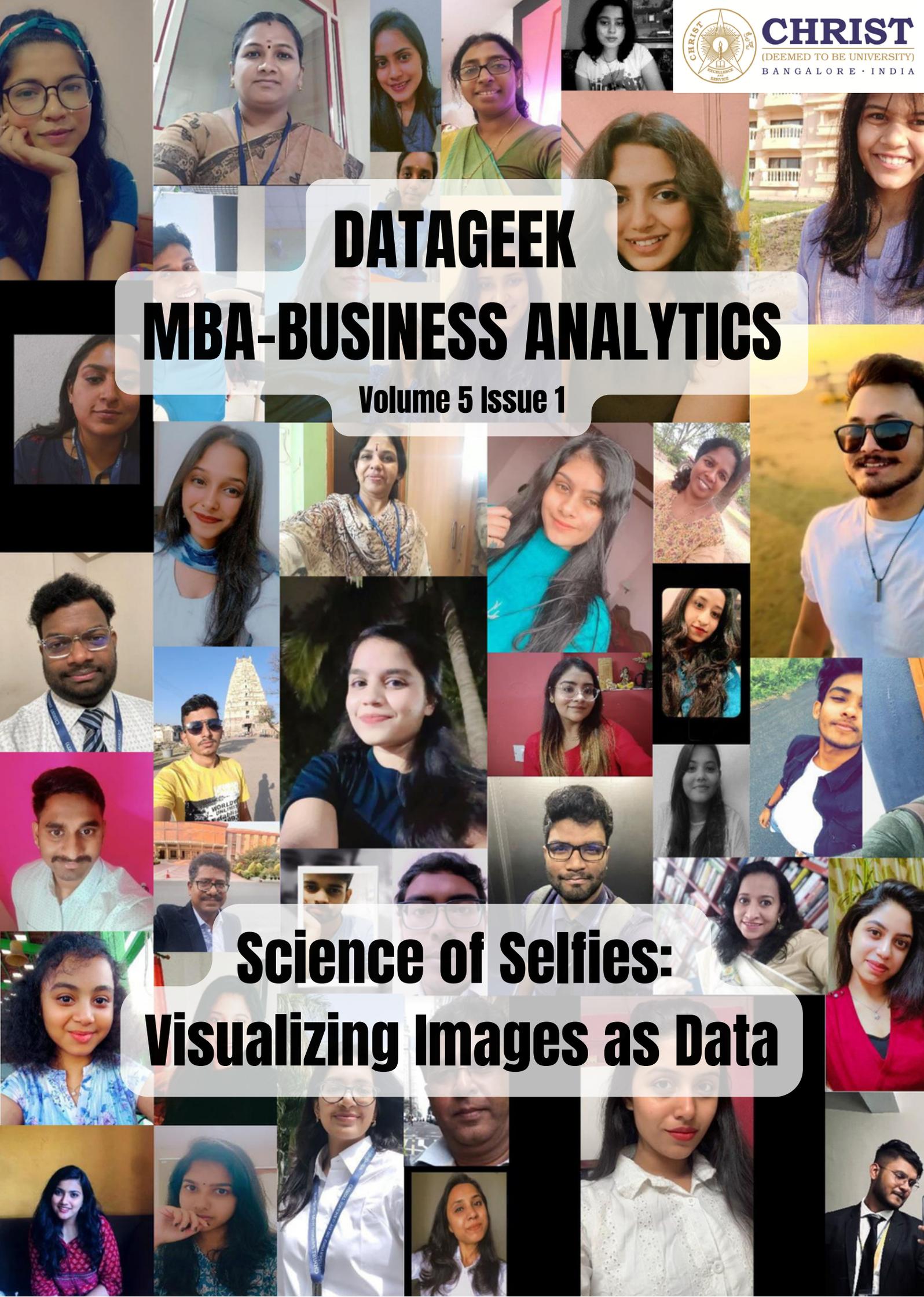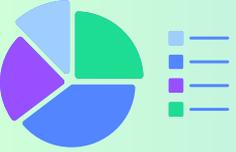
CHRIST
(DEEMED TO BE UNIVERSITY)
BANGALORE · INDIA

Science of Selfies:
Visualizing Images as Data

Table of Contents

Source: octopusbi.com
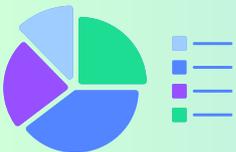
Dr. Rosewine Joy

Editor's Desk

Admirers call data visualization magic in graphs. Though the primary goal of visualization is to turn information into insights, it has acquired the image of storytelling with data. The effectiveness of data visualization can be understood from its simplicity, relevance, and ability to divulge otherwise invisible insights. As the saying goes, "Everything that was created first started as an idea." Therefore, we can say that visualization is applicable in all fields where creative thinking is required, making it an essential subject in every business field.

The theme of this issue is: "Science of selfies: Visualizing images as data." Data visualization is a science and an art, like any management subject. The science aspect deals with understanding the data and data types and making appropriate visualizations based on data, and the art aspect is all about the aesthetic element in visualization. Data visualization is increasingly becoming increasingly complex, as data is no longer confined to quantitative information but also qualitative information in the form of images, videos, and text. About 80% of the data produced is qualitative information. All of us love to take selfies. However, we have probably never considered them as data or whether they could be treated as data. As the selfie is a data form intimately related to the younger generation, we are exploring why and how selfies are used as data through this newsletter.
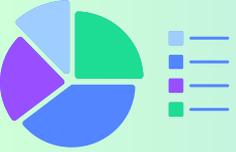
I would like to extend my gratitude to our Director Fr. Thomas T.V., Dean Dr. Jain Mathew, Associate Dean Dr. Jeevananda S, and Heads of Department Dr. Mareena Mathew and Professor Krishna M.C. I especially thank the Head of Specialization - Business Analytics, Dr. Lakshmi Shankar Iyer, for her guidance and support. Also, we are grateful that our students received an opportunity to interview Mr. Andrew C. Madson, a data leader and AVP, LPL Financial, USA, Mr. AmitKumar Shrivastava, Head of AI, Fujitsu, and our beloved alumnus Mr. Alen Alosious. Special appreciation goes to the newsletter team for their effort, time, and input, without which this issue would not have been possible. A big thanks to all the students who have provided their valuable inputs. Once again, congratulations to the entire team. We hope you enjoy reading this issue, and as always, we welcome your feedback and suggestions for future topics.

Please reach out to us for any queries or suggestions at datageek@mba.christuniversity.in

Best Regards
Dr. Rosewine Joy
Associate Professor
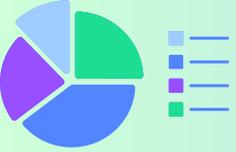
Interview with
Andrew C. Madson,
AVP of Product Management,
at LPL Financial,USA

Andrew C. Madson
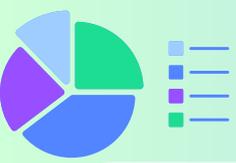
Exploring the World of Artificial Intelligence

1. What initially attracted you to data analysis, and how did you embark on your career in this field?

I enjoy problem-solving. I was working as a director in a financial services company in a compliance role. I used large amounts of data and statistics to make difficult decisions, but I didn't know that data analytics could be a career. It was just taking off and becoming more prominent in companies beyond FAANG. I returned to school and got an MS in Data Analytics but never looked back.

2. Before ChatGPT, we were unaware of the concept of Generative AI. Could you please define Generative AI and explain its sudden rise?

Generative AI is a branch of large language models that predict natural language. Its sudden rise is likely due to the improved UI and accuracy. ChatGPT has been around for years but was used by a select few. It was clunky and inaccurate. Now, it is easy to use and beneficial.

3. Due to the substantial carbon footprint and energy consumption associated with some programming languages, they cannot be considered a sustainable choice for the future. Which programming languages, in your opinion, might be adopted in the future, and why?

I don't think the programming language will be the concern; it will be the use. Specific tasks take a lot of computing, and balancing power trade-offs with sustainability will be the question.

4. How would you plan your learning pathway if you were to start over in the data field?

Find a job that you want. Read the qualifications, and then use the qualifications as your roadmap. Focus on projects with tangible ROI.
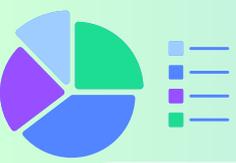
5. As aspiring data professionals, which roles should we aim for to ensure AI won't easily replace us?

Any role that requires critical thinking. AI won't replace you. Someone who knows how to use AI will replace you.

6. Machine learning and AI models can sometimes yield biased or unfair results. How do you address bias in your data-driven solutions?

There are many ways to address bias. You manage it on the front end by sampling the data correctly and addressing inefficiencies and biases before training the model. You can also address bias on the backend by measuring the output. There are very sophisticated ways of retracing how a complex model created an output, but this takes 10-20x more computing than it takes to train the model in the first place.

7. As a data professional, could you describe a typical day?

I am a leader. I focus on strategy and big-picture roadmaps. I organize stakeholders and my data teams to make meaningful progress on maturing analytics capabilities while maintaining existing services.

8. How do you foresee the evolution of the role of a data scientist in the coming years?

Data science will be rolled up into other roles. Data science is a skill set used in marketing, legal, compliance, product management, and many other areas. These areas will incorporate data science and analytics into the required skill sets rather than having separate groups of specialists.

Ajay Tom
2227002
BA 1
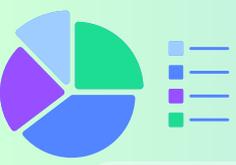
Interview with Amitkumar Srivastava, Head of AI, Fujitsu Consulting India, Fujitsu Fellow & Global Fujitsu Distinguished Engineer

Amitkumar Shrivastava
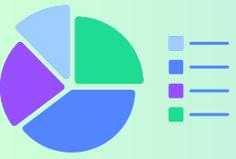
Unlocking the Power of Selfies:
Challenges and Opportunities in Business Engagement

1. How can businesses use selfies and images as data to make better decisions and understand their customers?

Businesses use selfies to gather information about your fashion preferences, travel destinations, and makeup choices to create targeted ads and recommendations. They analyze your selfies to determine what clothes you wear or where you are traveling, allowing them to show you relevant ads. Selfies also help businesses track your behavior and interests, aiding them in refining their advertising strategies. If you're concerned about this, you can choose not to share your selfies online.

2. What are some difficulties companies might face when trying to analyze selfie and image data? How can these challenges be solved?

Analyzing the overwhelming volume of selfie and image data poses challenges in privacy, context, emotion recognition, and evolving visual trends. Companies must ensure user consent and comply with data protection regulations. Advanced algorithms help address image quality and cultural nuances. Continuous refinement of AI models is necessary for understanding human emotions. Balancing costs with scalable cloud solutions and open-source tools is crucial for effective image analytics.

3. How have computers and technology helped us understand selfies and images better? Can you share how this technology might be used in the future?

Computing and image processing advancements have revolutionized our understanding of selfies and images. Techniques like segmentation, feature extraction, object detection, classification, and retrieval have merged technology with artistry. The future promises applications like a "Digital Mirror" for early health checking, "Smart Cities" with dynamically reacting streets, educational apps that adapt to student engagement, and "Cultural Connect Platforms" for global understanding. Farms of the future may use drones to monitor crops and ensure higher yields.
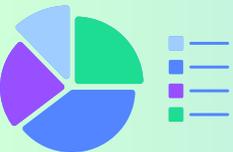
4. What are some ethical considerations for using selfies and images as data?

Using personal photos in public raises ethical concerns, such as unintentional disclosure of private details and the need for consent. Alteration and misuse of photos are potential risks, emphasizing the importance of authenticity checks and secure storage. Respecting ownership rights and considering images' cultural and emotional significance is essential. Responsible photo use requires ethical decision-making, technological caution, and mindfulness.

5. How can businesses use selfies and images to create more personalized and engaging customer experiences?

Selfies and images are transforming the way businesses engage with customers, as demonstrated by Nike's "Nike By You" campaign. Brands like Starbucks, TripAdvisor, Chipotle, and Warby Parker leverage customer images to personalize experiences, create digital buzz, and optimize online shopping. This trend signifies a shift towards increased personalization and innovative digital interactions in business.

B Shikhara
2228112
BA 3
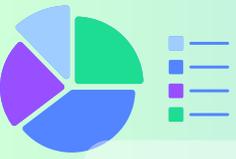
Interview with Alumnus:
Alen Alosious
Batch 2021-2023
Business Analytics

Alen Alosious
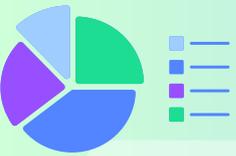
Leveraging Selfies and Images for Informed Decision-Making

1. How can businesses use selfies and images as data to make better decisions and understand their customers?

Businesses can use selfies and images as data for facial recognition, sentiment analysis, and demographic profiling to gain insights into customer preferences and behavior, enabling better decision-making and personalized marketing strategies.

2. What are some difficulties companies might face when trying to analyze selfie and image data? How can these challenges be solved?

Analyzing selfie and image data includes privacy concerns, data quality issues, and the need for robust image recognition algorithms. These challenges can be addressed through strict data anonymization, data preprocessing techniques, and ongoing algorithm improvement efforts.

3. How can businesses ensure they get accurate and reliable data from selfies and images?

Businesses can employ advanced image recognition and facial recognition technologies combined with rigorous data validation processes to ensure accurate and reliable data from selfies and images.

4. What are some ethical considerations for using selfies and images as data?

Issues related to consent, privacy, data security, and potential biases in data collection and analysis

Aaron Joseph Shaijan
2227901
BA 3

Ethical Considerations in Data Visualization

Source: toptal.com
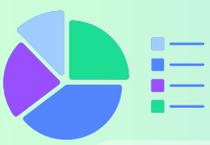
Anusha S
2228109
BA 3

In today's data-driven world, data visualization is essential for effectively conveying complex information and facilitating informed decision-making. However, it is crucial to consider the ethical aspects of data visualization. Ethical responsibilities include ensuring truthful representation by accurately reflecting data and avoiding distortion, safeguarding data privacy and anonymity, maintaining transparency in data sources and processing, making design choices with integrity to prevent misrepresentation, and exercising caution when using data visualization as a persuasive tool to ensure it is not manipulative and provides precise data context for the intended audience.

Additionally, ethical considerations in data visualization extend to the broader societal impact. Beyond individual responsibilities, there is a collective obligation to use data visualization to promote fairness, equity, and social good. This entails being mindful of potential biases in data selection, analysis, and presentation that can perpetuate discrimination or disadvantage certain groups. Ethical data visualization should strive to empower individuals and communities, foster data literacy, and contribute to a more equitable and just society. Practitioners and organizations need to embrace ethical guidelines and continuously evaluate the social implications of their data visualization practices to ensure that they align with broader ethical principles and societal values.
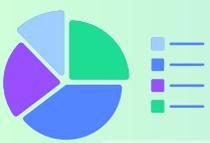
Exploring the impact of selfies on modern relationships: A deeper insight
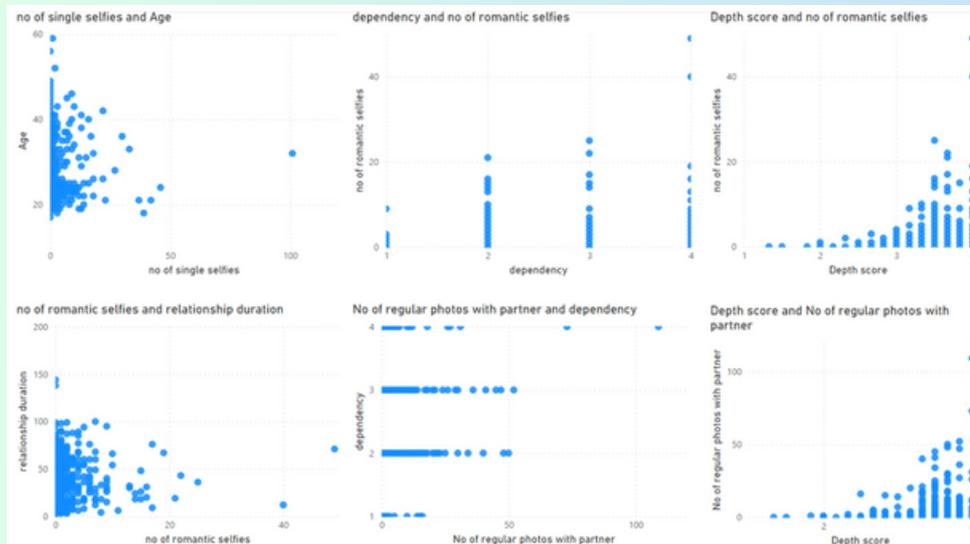

Gayathri S
2227225
BA 1

In the realm of modern relationships, the influence of selfies on individuals' love lives is explored through a detailed dashboard analysis. The dashboard aims to understand whether people's love lives drive their selfie habits or if the obsession with selfies fuels an increased focus on romantic connections. It features six scatter plots investigating the interplay between love, age, and selfie-taking. The findings reveal that the peak of selfie activity occurs between the ages of 20 and 40. Additionally, the analysis shows that romantic selfies are most common in the early stages of a relationship and decrease as relationships mature. The dashboard also highlights a correlation between partner dependency and increased romantic selfies and partner photos, indicating a connection between emotional bonding and digital expression. Moreover, it demonstrates that deeper relationships are associated with more romantic selfies and partner photographs, suggesting that relationship depth amplifies the desire to capture shared moments visually. Overall, the dashboard underscores the significance of digital expressions as symbols of connection and intimacy in the modern era and invites contemplation on the intersection of technology and love.
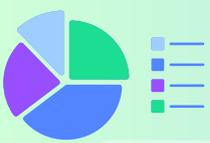
Gender Classification from Facial Images: Exploring Data and Model Performance
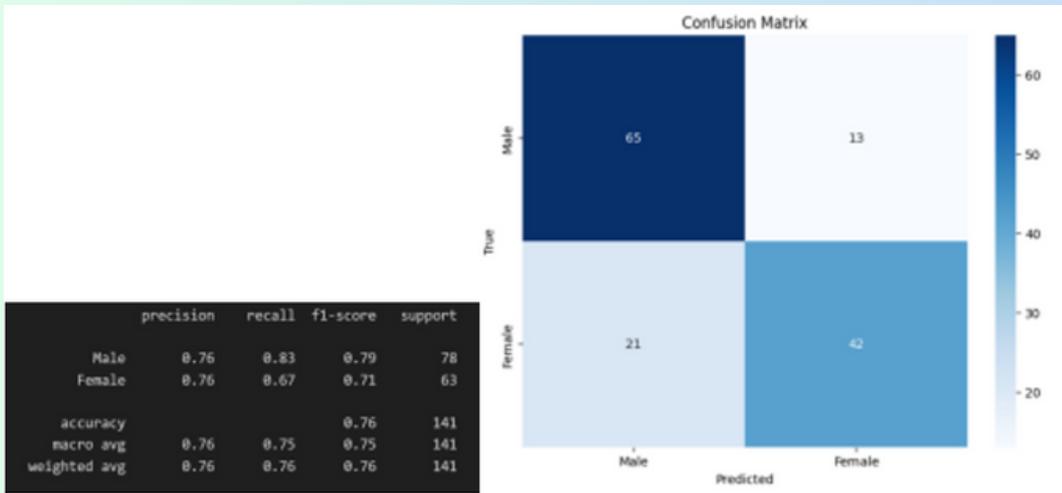
Pranamya H N
2227134
BA 1

In the realm of computer vision, gender classification from facial images using Convolutional Neural Networks (CNNs) is a fascinating challenge. This project began with data exploration and insights, analyzing a dataset containing male and female face images to understand their characteristics. Subsequently, a robust CNN model was meticulously crafted and trained on preprocessed data, achieving an impressive 76% accuracy in predicting gender. The Receiver Operating Characteristic (ROC) curve with an AUC of 0.86 showcased the model's discrimination ability. Additionally, the Precision-Recall curve with an AUC of 0.84 highlighted the balance between high precision and reasonable recall. These results suggest promising real-world applications in facial recognition and social media analysis, with the potential for customized approaches and further advancements in computer vision and artificial intelligence.
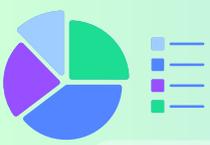
Visualization of Agricultural Cropping Patterns for Food Security and Growth in India

Source: freewave.com

Mokesh Krishnan M
2227842
BA 2

This study offers a comprehensive analysis of crop production data in India, focusing on long-term trends, geographical distribution, and the development of a Crop Monitoring Dashboard. Its primary objective is to examine long-term trends and patterns in crop production, providing valuable insights for policymakers, agricultural experts, and farmers. By utilizing advanced data visualization and predictive analytics, the study aids in understanding factors influencing crop productivity. The geographical representation of cropping patterns enables efficient resource allocation and targeted interventions. The Crop Monitoring Dashboard is a decision support tool empowering farmers to monitor production, address issues, and optimize yields. Ultimately, this research improves crop productivity, ensures food security, and promotes sustainable agriculture.

Additionally, the study highlights the importance of data-driven agricultural decision-making, bridging the gap between traditional farming practices and modern technology. It paves the way for informed and sustainable crop management strategies. Furthermore, the research underscores the role of technology in addressing food security challenges and fostering resilience in the agricultural sector.
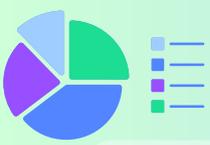
Role of Machine Learning in Understanding Selfies

Source: neptune.ai

Majji Harshitha
2227531
BA 2

Applying machine learning to selfie analysis in business offers substantial benefits, including personalized user interactions, enhanced identification verification, and improved marketing strategies through sentiment analysis. Machine learning's ability to adapt recommendations based on individual preferences boosts engagement and loyalty. Moreover, it empowers organizations to make proactive decisions by harnessing predictive insights from collective selfie data. However, ethical considerations such as user privacy protection, consent, and addressing algorithmic biases are crucial. In essence, machine learning in selfie analysis transforms customer understanding, engagement approaches, and anticipatory decision-making, propelling businesses into the era of data-driven decision-making.

Machine learning and selfie analysis integration revolutionize customer interactions and enhance operational efficiency by streamlining decision-making processes. Responsible and ethical implementation remains paramount as businesses navigate this data-driven landscape to ensure trust and transparency in this transformative technology.

From Pixels to Patterns: The Art of Visualization

Source: freepik.com
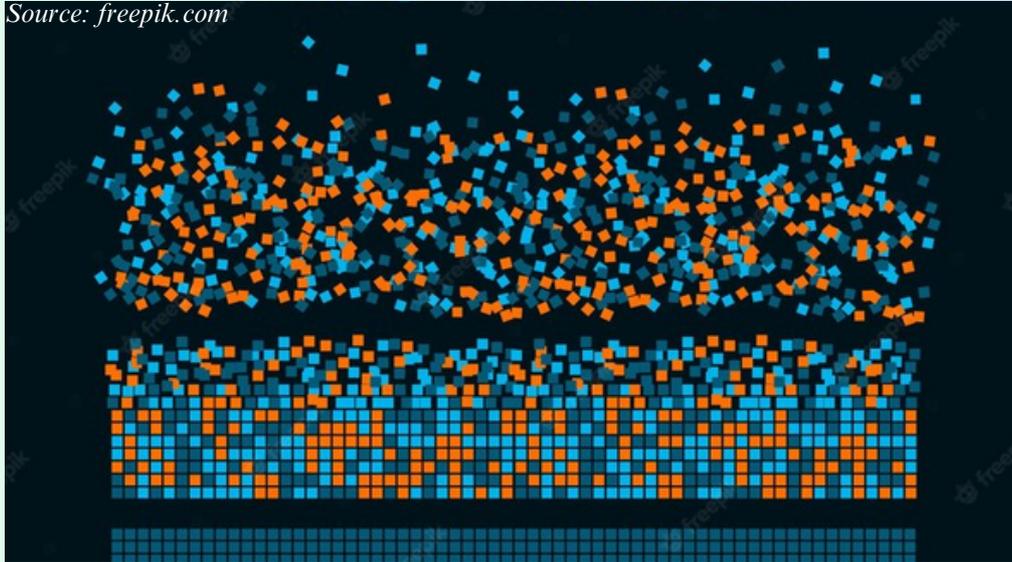
B Shikhara
2228112
BA 3

Data is a powerful key that unveils hidden narratives and influences our daily choices. In today's world of social media, even our selfies contain a wealth of data waiting to be harnessed. Through advanced visualization techniques, the data within each snapshot, from facial expressions to weather conditions and location, can offer profound insights into human behavior and emotions. The science of selfie data visualization opens new avenues for understanding ourselves and our surroundings, with tools like emotion heat maps and scatter plots revealing intriguing patterns and trends. It's a reminder that behind every photo lies a captivating data story waiting to be explored and appreciated.

This fusion of visual imagery and data deepens our self-awareness and enhances our understanding of the world. It underscores the idea that in the age of data, even a simple photograph can hold a wealth of untapped knowledge and insights, encouraging us to view our visual memories through a more analytical lens.

Recent trends in Data Visualization

Source: propstream.com
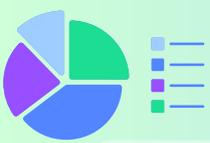
Nikhil BG
2228237
BA 3

Data visualization is crucial in helping organizations understand their business, trends, and competitive landscape. Recent trends in data visualization include the emergence of high-fidelity digital twins for remote asset monitoring, the use of Javascript frameworks for creating visually appealing front-end analysis, the integration of AI-powered systems for personalized insights, a mobile-first approach to optimize data visualization on small screens, and the specialization of data visualization for specific industries like shipping and automotive. These trends reflect the evolving landscape of data visualization, catering to diverse business needs and technological advancements.

These trends highlight the evolving nature of data visualization, enabling organizations to harness data-driven insights more effectively. By embracing high-fidelity digital models, AI-powered automation, mobile optimization, and industry-specific approaches, businesses can gain a competitive edge and make informed decisions in an increasingly data-centric world.

Power of Data Visualization in communicating the Data

Source: istockphoto.com


Punganuru Sruthi Priya
2228242
BA 3

Data visualization is an indispensable tool in the digital age, enabling the effective communication of complex information to a broader audience by leveraging our innate preference for images. It lets us grasp data 60,000 times faster than text, simplifying intricate data into understandable and memorable visual narratives. This art of storytelling breathes life into raw data, revealing trends and insights that captivate and inform viewers. Selecting the appropriate visualization technique, such as pie charts, line graphs, or bar charts, is crucial, with user-friendly programs like Tableau Public and Google Data Studio catering to various skill levels. Ethical considerations, including accuracy, responsibility, and transparency, enhance trust in data visualization. In our data-driven world, harnessing the power of data visualization is essential for researchers, professionals, and enthusiasts alike, empowering us to engage audiences, effectively convey complexity, and make well-informed decisions.

The Evolution of Analytical Tools:
A Gartner Hype Cycle Analysis

Source: Google
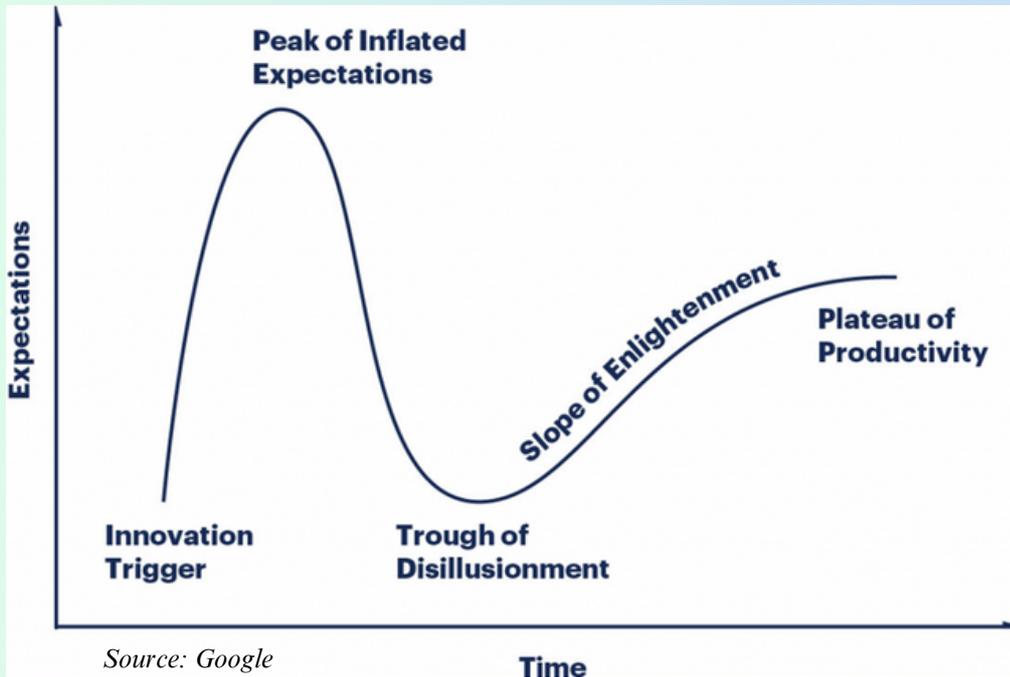
Donel K Jaison
2227910
BA 3

Businesses seeking to achieve a competitive edge through data-driven decision-making must keep at the cutting edge of technology innovations in the fast-paced field of business analytics. The Hype Cycle from Gartner is a valuable framework for evaluating the maturity and popularity of analytical tools within the business analytics ecosystem. This article examines the development of Business analytical tools, classifying several well-known tools by their position in the hype cycle and highlighting their value in assisting businesses in effectively using data. Business analytical tools are essential for helping firms convert raw data into valuable insights and enabling informed decision-making.

Emerging technologies or trends are introduced during the first stage; the innovation trigger stage is characterized by enormous expectations and potential but few real-world applications. With time, this innovation trigger progresses to the second stage, the Peak of Inflated Expectations, where the trend or technology receives much attention and hype along with inflated claims about its potential and influence. Tools that use Natural Language Processing (NLP) for analytics, such as Google Cloud Natural Language, Amazon Comprehend, and Microsoft Azure Cognitive Services for Text Analytics, are at this stage of development in the market. These tools have much potential for businesses wanting to extract insightful information from unstructured text data.
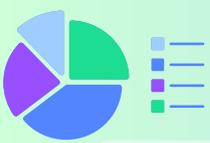
As the technology's limitations and difficulties become more evident, the initial enthusiasm declines, leaving discontent and dissatisfaction in its wake. Tools like SAP Business Objects, Yellowfin BI, Domo, and SAS Business Intelligence can be found in the Trough of Disillusionment. Although promising, these tools are relatively recent, and companies are adjusting to the learning curve. However, they provide special features and capabilities that, when properly utilized, can considerably improve BI efforts, holding significant potential for those prepared to invest in them.

Moving on, the Slope of Enlightenment level includes well-established and extensively used technologies. This is where Google Analytics, Tableau, Microsoft Power BI, and QlikView/Qlik Sense are located. These technologies have demonstrated their worth by giving firms robust data analytics, reporting, and visualization capabilities. Users are now experiencing authentic benefits from improved decision-making to improved data-driven strategies.

The Plateau of Productivity represents an advanced stage of development and widespread usage. This stage includes analytical tools like IBM Cognos Analytics, Alteryx, RapidMiner, Orange, and Knime. Today, organizations of all sizes and from various sectors use these tools as essential components of their BI toolkits to address a broad range of BI concerns. Stability, a vast user base, and numerous use cases distinguish them.

In conclusion, Gartner's Hype Cycle offers a helpful framework for evaluating the development of analytical tools. Organizations have various options to meet their demands for data analysis and reporting due to analytical tools in varying levels of development and use. Considering their unique needs and goals, enterprises must match these technologies' data mining strategies' maturity and potential. As the BI environment evolves, remaining enlightened about the positioning of analytical tools on the Hype Cycle is critical for making informed business decisions and harnessing the power of data for strategic advantage.

AI and Space Sustainability

Rethanyasri NA
1 MBA K
2327948

Source: space.nss.org

Mohana J
1 MBA K
2327936

Space sustainability is using space resources in a way that does not harm the Earth or its inhabitants. It includes reducing the amount of space debris, developing new technologies to remove debris from orbit, and promoting the peaceful use of space.

A significant obstacle to space sustainability is the increasing number of satellites in orbit. Due to the increased chance of a collision as these spacecraft come closer to one another, even a minor collision can result in significant amounts of space debris. Consequently, other satellites and even space travelers could be in danger from this debris.

A team of scientists at the European Space Agency (ESA) are utilizing AI to create a new thermosphere density field model. The thermosphere, the topmost layer of the atmosphere, is where most space debris is found. The team's model, developed after extensive historical data training, is far more accurate than other models at forecasting air density.

The ESA's study is a promising first step in utilizing AI to increase space sustainability. AI can aid in lowering the likelihood of satellite and space debris collisions by improving our understanding of the mechanics of the atmosphere. This will contribute to making space for future generations safer and more sustainable.

Other organizations are researching how to employ AI for space sustainability and the ESA. One such platform being developed by the Space Sustainability Institute will track and forecast the migration of space junk. This platform will provide the detection of possible collisions and the suggestion of mitigation measures.

Space Sustainability: Why It Matters for Earth
Space sustainability is crucial for Earth for several reasons.
1) First, satellites may be damaged or even destroyed when space debris collides with them. This may affect essential services like communications, navigation, and weather forecasting.
2) Second, astronauts and other space travelers may be in danger from space debris. Even a tiny bit of waste could be lethal in a collision.
3) Third, the climate and atmosphere of the Earth may be harmed by space debris. Space junk can break down into tiny particles as it re-enters the atmosphere, contaminating the air and water.
4) Finally, space junk may make launching new satellites or carrying out space missions challenging or even impossible. This may restrict our ability to use space for economic development, scientific research, and exploration.

Although it is still in its early stages, the application of AI to space sustainability has the potential to have a significant influence. AI can contribute to developing a more sustainable and safe space environment by increasing our knowledge of the atmosphere and the movement of space junk.
By promoting space sustainability, we can ensure that these benefits are available to future generations!

Memes Corner

When there are too many null values in the selfie data set data analyst be like

Analysts after successfully running codes for image analytics

Waiting for the visualizations after all the prompts

Normal Dataset   Selfies Dataset
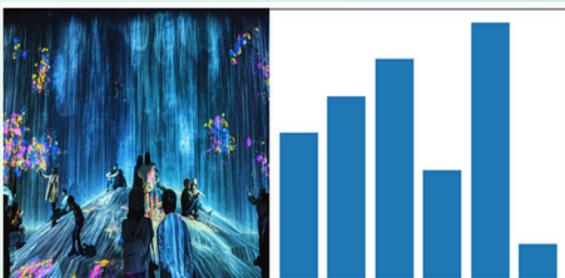
Visualization Expectation   Visualization Reality

Analysts after they make different visualizations for the same column

Word Scramble

1. Htsnigpceaual iHnashg

2. Nltaooveicnol Nuarnes Nlotekc

3. Rarageetn Doyial

4. Feeslif Nimttnese Tnsaylas

5. Atmicen Sgegntotiemna

6. Atadeta Metnrinehne

Nigel Prakash
2227846
BA 2

Quiz & Get Featured

Welcome to our interactive quiz! Scan the QR code to answer the questions.

Nigel Prakash
2227846
BA 2

Exciting prizes are awaiting the winners.
Also, get a chance to be featured in the next issue

Student Editorial Team

Achari Bhavana
2227401

**Velpuri Venkata
Satya Sai Sriram**
2227964

**Sharon Varghese
Sunny**
2227957

Karthikeyan Ojash
2227922
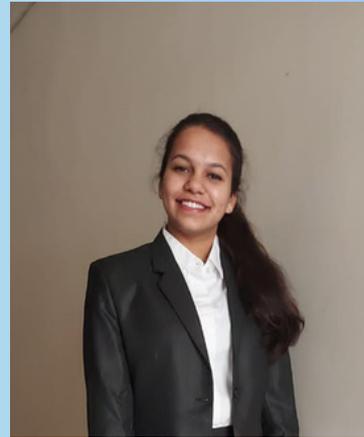
Adapa Jagruthi
2227801

Garvit Sachdeva
2227719

Joshikaa Devi
2227526