A comprehensive analysis of the IT sector Salaries and Roles

Website Link:
https://whiteknightjr.github.io/Team_95_Comprehensive_IT_Analytics/

Smart bridge Data Analytics Final Project by Team-95

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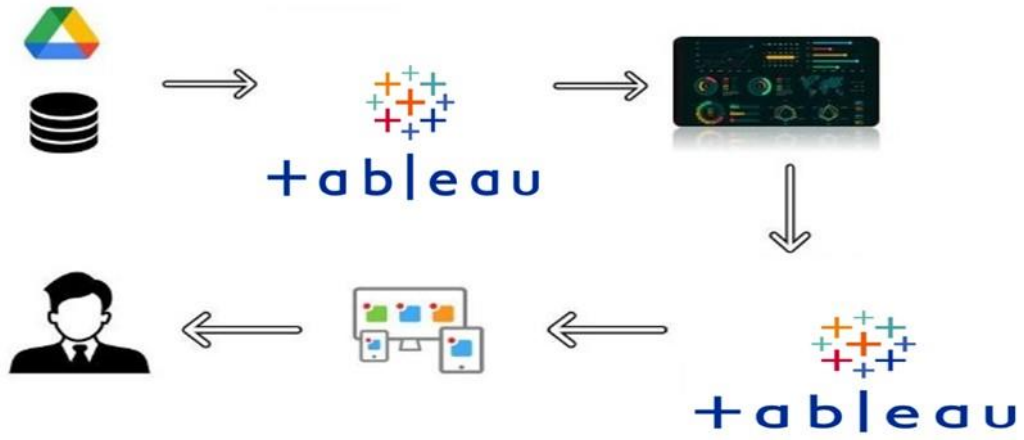
A Comprehensive Analysis Of The IT Sector Salaries And Roles

"A Comprehensive Analysis of the IT Sector Salaries and Roles" is a detailed research study that delves into the intricacies of the IT industry, providing a comprehensive understanding of the salary structures and various roles within this dynamic sector. The analysis aims to equip professionals, job seekers, and organizations with valuable insights into the factors that influence earning potential and career growth in the IT field. The analysis begins by introducing the IT sector and its significance in today's digital era. It highlights the diverse range of roles available, such as those of software developers, data scientists, cybersecurity analysts, project managers, and network administrators, among others. By exploring the multitude of roles, readers gain a clear understanding of the skill sets and responsibilities associated with each position.

Technical Architecture:



Project Flow
To accomplish this, we have to complete all the activities listed below,

Define Problem / Problem Understanding

- Specify the business problem
- Business requirements
- Literature Survey
- Social or Business Impact.

Data Collection & Extraction from Database

- Collect the dataset,
- Connect IBM DB2 with IBM cognos

Data Preparation

- Prepare the Data for Visualization

Data Visualizations

- No of Unique Visualizations

Dashboard

- Responsive and Design of Dashboard

Story

- No of Scenes of Story

Report

- Creating a report

Performance Testing

- Amount of Data Rendered to DB ‘
- Utilization of Data Filters
- No of Calculation Fields
- No of Visualizations/ Graphs

Web Integration

- Dashboard and Story embed with UI With Flask

Project Demonstration & Documentation

- Record explanation Video for project end to end solution
- Project Documentation-Step by step project development procedure

The Business Problem

"A Comprehensive Analysis of the IT Sector Salaries and Roles" is a detailed research study that delves into the intricacies of the IT industry, providing a comprehensive understanding of the salary structures and various roles within this dynamic sector. The analysis aims to equip professionals, job seekers, and organizations with valuable insights into the factors that influence earning potential and career growth in the IT field. The analysis begins by introducing the IT sector and its significance in today's digital era. It highlights the diverse range of roles available, such as those of software developers, data scientists, cybersecurity analysts, project managers, and network administrators, among others. By exploring the multitude of roles, readers gain a clear understanding of the skill sets and responsibilities associated with each position.

Business Requirements

The business requirements for this project would likely include

Data collection:

The first requirement is to collect data from Kaggle that is relevant to the Company name, Job Title, Salary, Salaries reported, Location, Employment Status, Job roles, and rating

Data cleaning and preparation:

The collected data must be cleaned and processed to ensure it is suitable for analysis. This may involve removing irrelevant information, correcting inconsistencies and missing values, and transforming the data into a format that is compatible with the analysis tools.

Data analysis:

The data must be analyzed to uncover meaningful insights. This could involve using techniques such as descriptive statistics, regression analysis and data visualization to gain a deeper understanding of the data.

Report creation:

The insights and findings from the data analysis must be presented in a comprehensive report that includes visualizations and data tables. The report must be well organized and easy to understand, with clear and concise explanations of the results.

Literature Survey

This literature survey aims to provide a comprehensive analysis of the IT sector's salaries and roles, exploring the factors that influence compensation in the field of information technology. The IT industry has witnessed significant growth and transformation in recent years, making it crucial to understand the dynamics of salaries and roles to attract and retain top talent. This survey will review relevant studies, reports, and articles to explore various factors such as job roles, experience levels, geographical location, industry sectors, and technological advancements that impact IT salaries.
By analyzing existing literature, this survey will contribute to an enhanced understanding of IT sector salaries and roles, assisting professionals, organizations, and policymakers in making informed decisions.

Social Or Business Impact

Social Impact: Understanding the roles and salaries in the IT sector can assist organizations in workforce planning and talent retention strategies. By analyzing compensation trends, organizations can identify areas where they may need to offer competitive salaries and benefits to attract and retain skilled IT professionals. This can lead to better job satisfaction, improved employee retention rates, and a more stable workforce.

Business Model/Impact: Understanding the salaries and roles in the IT sector can assist businesses in their recruitment and hiring processes. They can tailor their job descriptions and requirements based on the analysis to attract suitable candidates. By offering competitive salaries and highlighting career growth opportunities, businesses can improve their chances of attracting qualified IT professionals and reduce recruitment challenges.

Data Collection & Extraction From Database

Data collection is the process of gathering and measuring information on variables of interest in an established, systematic fashion that enables one to answer stated research questions, test hypotheses, evaluate outcomes, and generate insights from the data.

Collect The Dataset

Activity 1.1: Understand the data

Check out the below link to understand the dataset in detail:
https://www.kaggle.com/datasets/iamsouravbanerjee/software-professional-salaries-2022 edia.csv

This Dataset contains information of Salaries for 22700+ various Job P..

This Dataset contains information of Salaries for 22700+ various Job Profiles..

https://www.kaggle.com/datasets/iamsouravbanerjee/software-professional-salaries-2022

Activity 2: Connect MySQL and Tableau with the dataset
Explanation video link:
https://drive.google.com/file/d/16eugdhFvIVSz841kvvruRU9aDgTGbFOM/view?usp=sharing

Data Preparation

Data preparation for Tableau involves the process of organizing, cleaning, and transforming raw data into a format that can be effectively visualized and analyzed within the Tableau software. This includes tasks such as data cleaning, data integration, data formatting, and data aggregation. The goal is to ensure that the data is accurate, consistent, and structured in a way that enables meaningful insights and visualizations in Tableau.

Prepare The Data For Visualization

Preparing the data for visualization involves cleaning the data to remove irrelevant or missing data, transforming the data into a format that can be easily visualized, exploring the data to identify patterns and trends, filtering the data to focus on specific subsets of data, preparing the data for visualization software, and ensuring the data is accurate and complete. This process helps to make the data easily understandable and ready for creating visualizations to gain insights into the performance and efficiency.

Data Visualization

Data visualization is the process of creating graphical representations of data in order to help people understand and explore the information. The goal of data visualization is to make complex datasets more accessible, intuitive, and easier to interpret. By using visual elements such as charts, graphs, and maps, data visualizations can help people quickly identify patterns, trends, and outliers in the data.

No Of Unique Visualizations (Filters Applied)

The number of unique visualizations that can be created with a given dataset. Some common types of visualizations that can be used to analyze the data include bar charts, line charts, heat maps, scatter plots, pie charts, maps, etc. These visualizations can be used to compare performance, track changes over time, show distribution, and show relationships between variables.

Activity 1.1: Job roles and count (% of total) of employees pursuing these roles [Represents Job roles,Count of job roles,% of total count of job roles along table]

Activity 1.2: Job Title and count(% of total) of employees based on their profession [Represents Job titles,Count of job titles,% of total count of job titles along table]

Activity 1.3: Employment status and count(% of total) of employees based on their profession [Represents employment status,Count of employment status,% of total count of employment status along table]

Activity 1.4: Key Personality Indicators[Represents distinct count of job roles, Avg.Rating,Avg.salary,count of salaries reported]

Activity 1.5: Represents Average salary by job roles and titles

Activity 1.6: Represents Company names and location

Activity 1.7: Represents employment status by job roles,job titles and average salary

Activity 1.8: Company wise(Top 10 companies filtered by avg salary) avg rating

Activity 1.9: Number of salaries reported by job role

Explanation video link :

https://drive.google.com/file/d/1pH7nYwjycwd7XxPLo0ZOF1DDaG1hEF9R/view?usp=sharing

Dashboard

A dashboard is a graphical user interface (GUI) that displays information and data in an organized, easy-to-read format. Dashboards are often used to provide real-time monitoring and analysis of data and are typically designed for a specific purpose or use case.

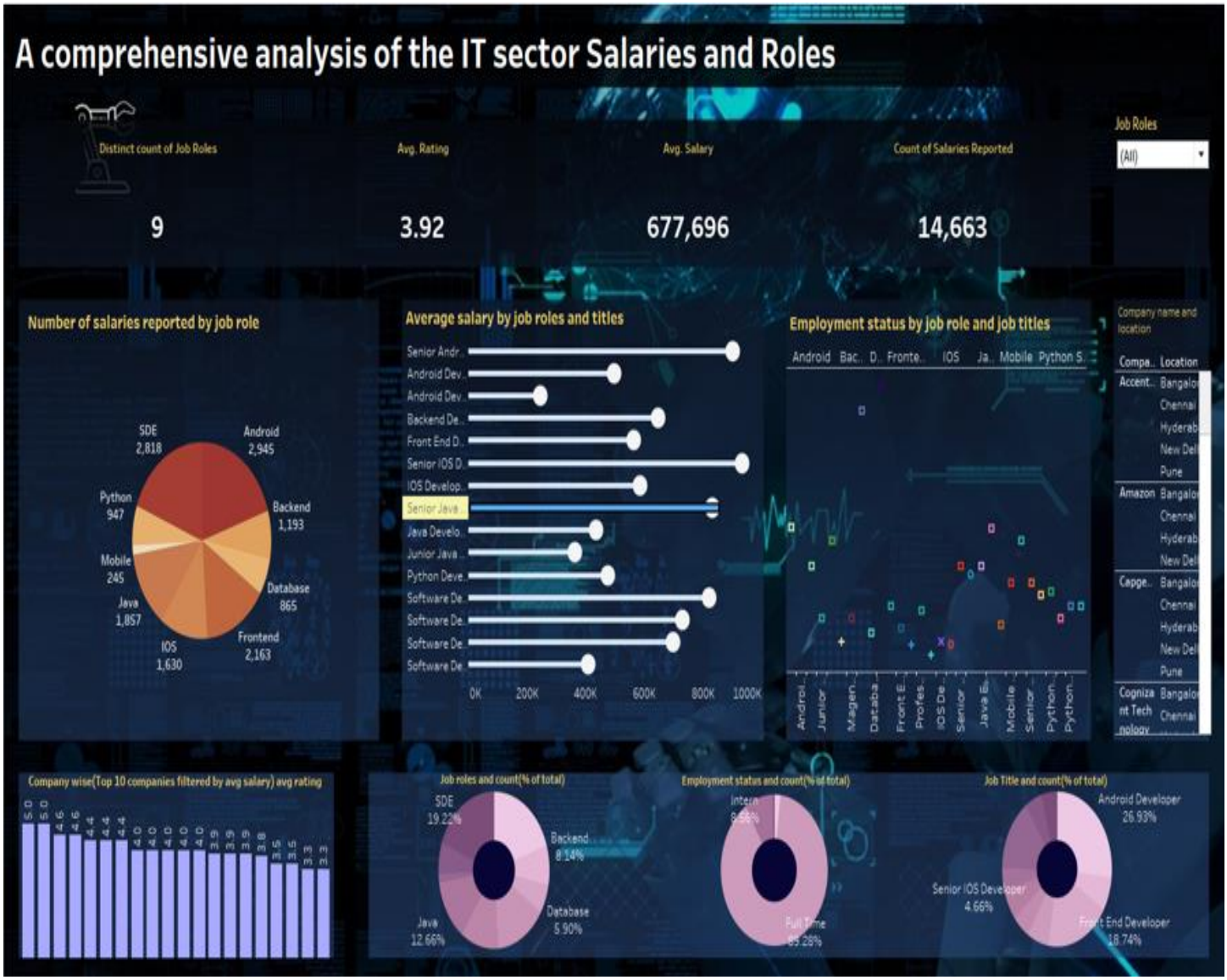
Dashboards can be used in a variety of settings, such as business, finance, manufacturing, healthcare, and many other industries. They can be used to track key performance indicators (KPIs), monitor performance metrics, and display data in the form of charts, graphs, and tables.

Responsiveness And Design Of Dashboard

The responsiveness and design of a dashboard for analyzing the factors important for A comprehensive analysis of the IT sector's salaries and roles analyzes various engagement metrics such as Company name, Job Title, Salary, Salaries reported, Location, Employment Status, Job roles, and Rating.

Explanation video link:

https://drive.google.com/file/d/1yx9Q_LNniddZIiUQgSIKjfLK2fatupas/view?usp=sharing



Story

A data story is a way of presenting data and analysis in a narrative format, with the goal of making the information more engaging and easier to understand. A data story typically includes a clear introduction that sets the stage and explains the context for the data, a body that presents the data and analysis in a logical and systematic way, and a conclusion that

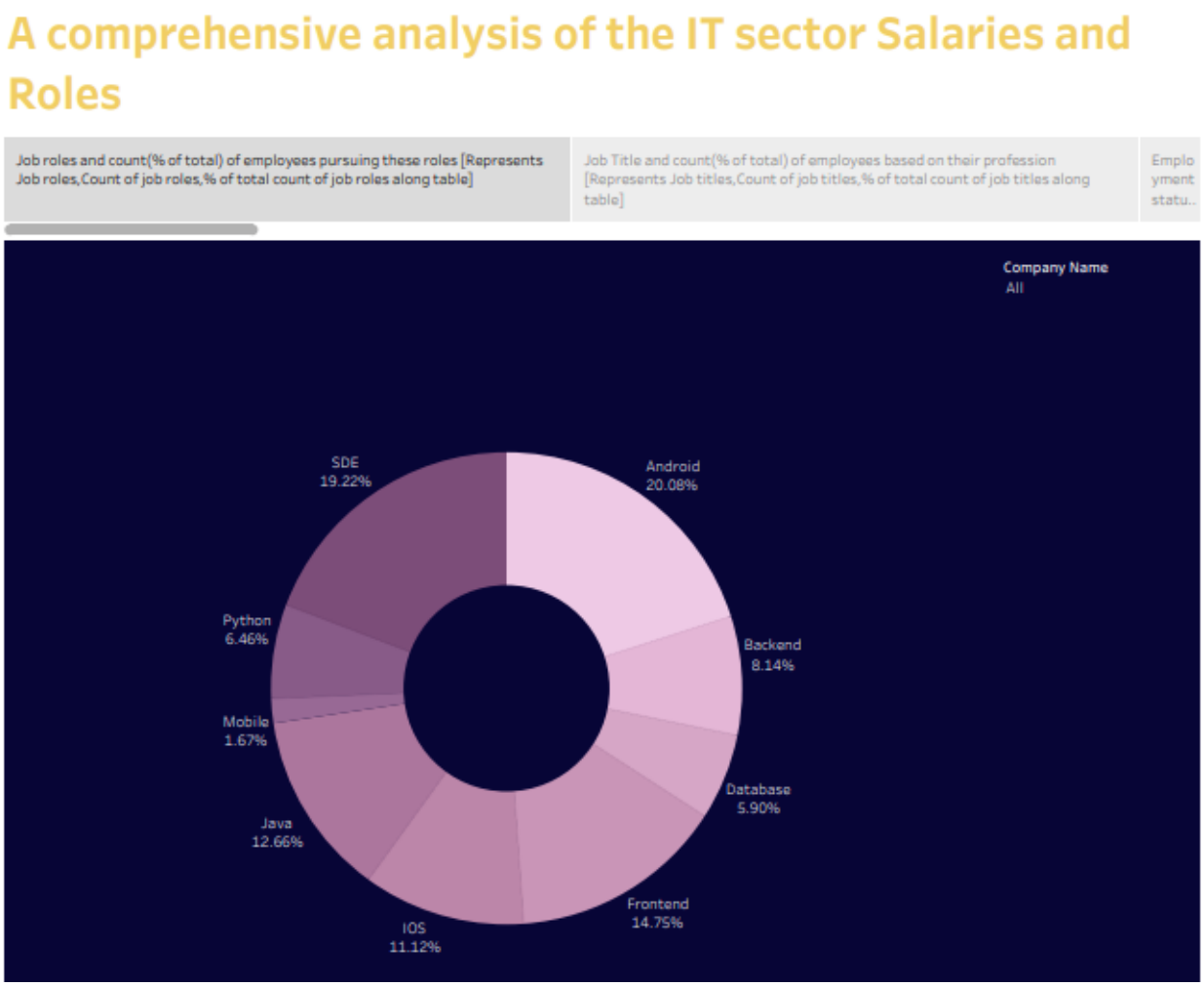
summarizes the key findings and highlights their implications. Data stories can be told using a variety of mediums, such as reports, presentations, interactive visualizations, and videos.

No Of Scenes Of Story

The number of scenes in a storyboard for a data visualization analysis of the factors affecting the insights of IT Sector Salaries, will depend on the complexity of the analysis and the specific insights that are trying to be conveyed. A storyboard is a visual representation of the data analysis process, and it breaks down the analysis into a series of steps or scenes.

Explanation video link:

https://drive.google.com/file/d/1yx9Q_LNniddZIiUQgSIKjfLK2fatupas/view?usp=sharing

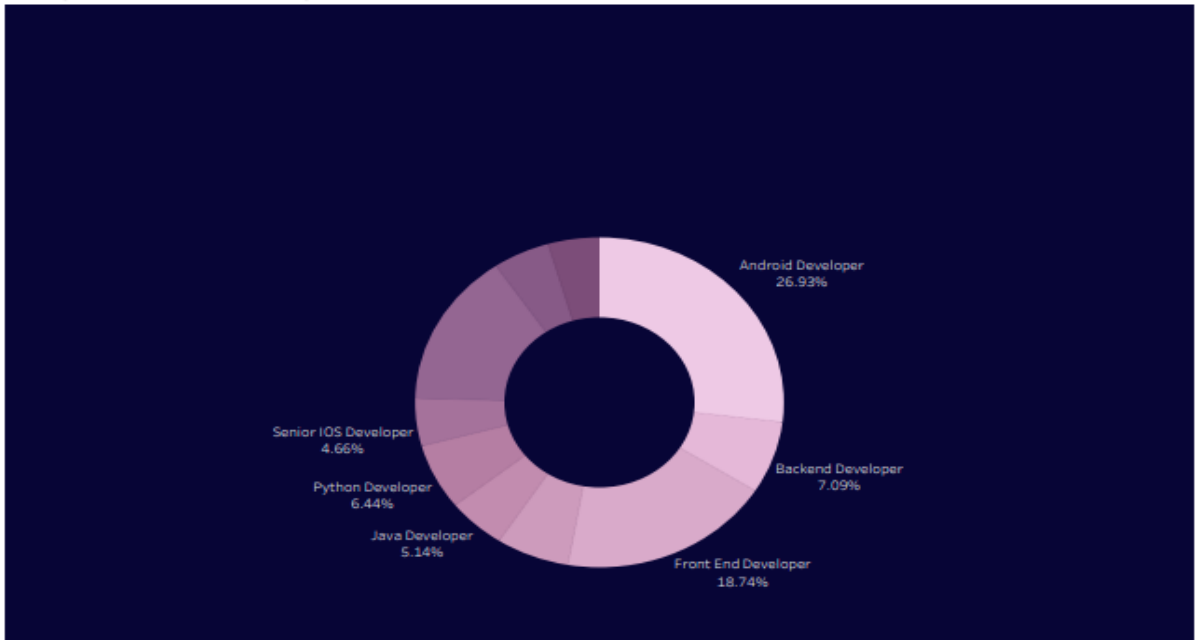


A comprehensive analysis of the IT sector Salaries and Roles

Job roles and count(% of total) of employees pursuing these roles [Represents Job roles,Count of job roles,...

Job Title and count(% of total) of employees based on their profession [Represents Job titles,Count of job titles,% of total count of job titles along table]

Employment status and count(% of total) of employees based on their profession [Represents employment status,Count of em...

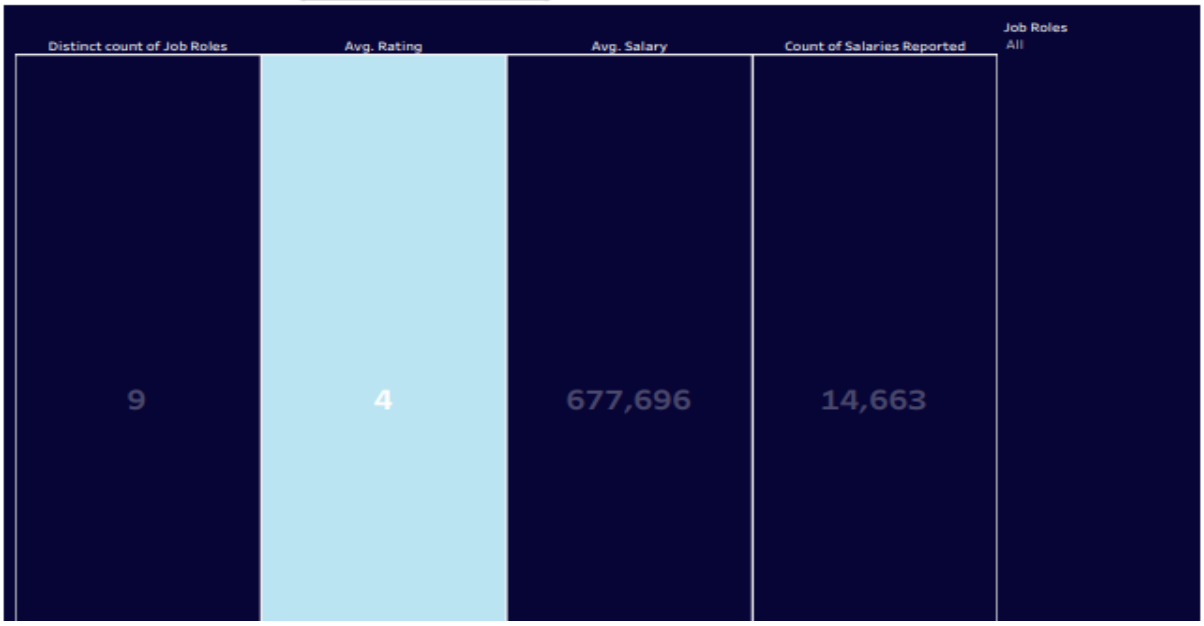


A comprehensive analysis of the IT sector Salaries and Roles

Employment status and count(% of total) of employees based on their profession [Represents employment status,Count of ..

Key Personality Indicators[Represents distinct count of job roles, Avg.Rating,Avg.salary,count of salaries reported]

Represents Average salary by job roles and titles



A comprehensive analysis of the IT sector Salaries and Roles

Job Title and count(% of total) of employees based on their profession [Represents Job titles,Count of job titles,...

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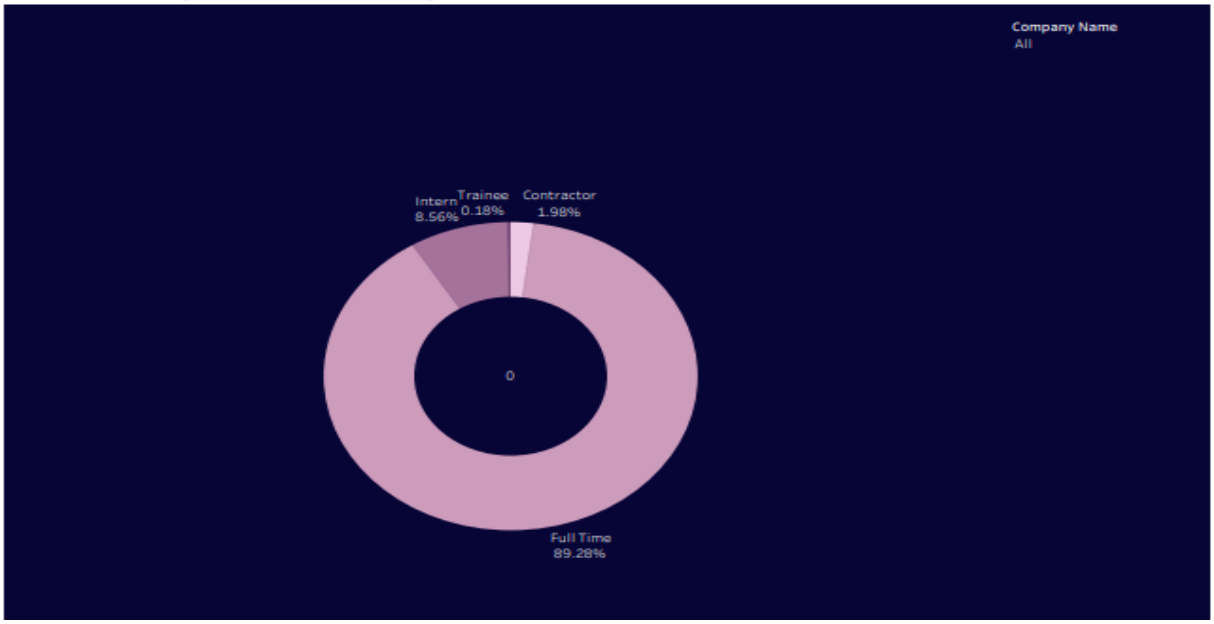
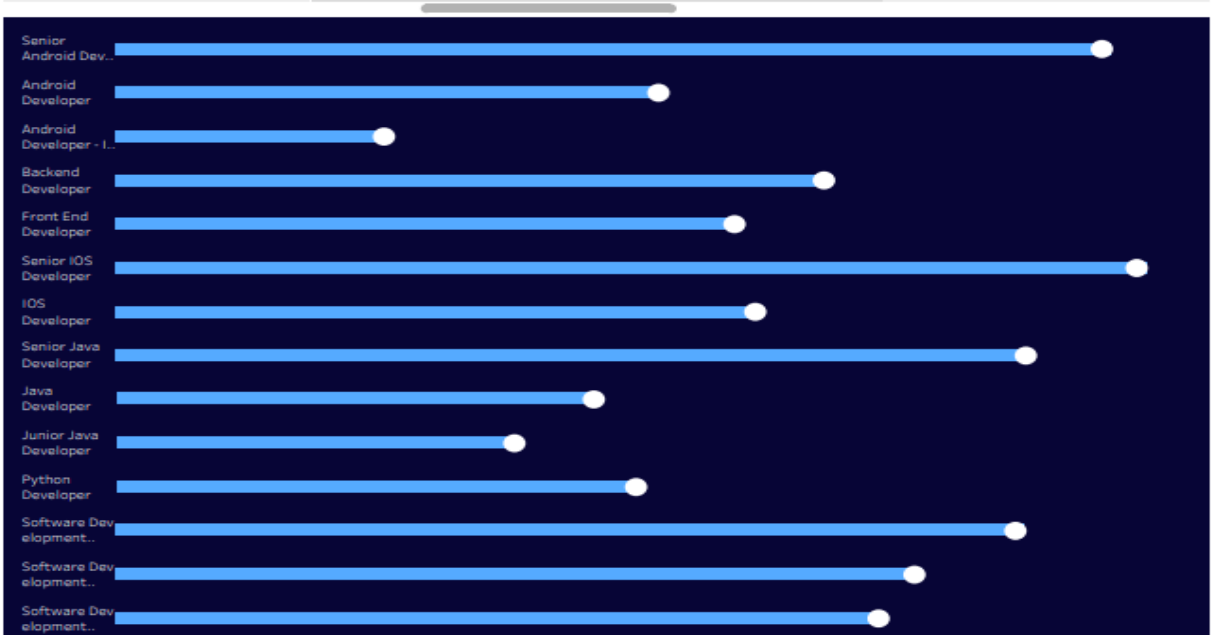


A comprehensive analysis of the IT sector Salaries and Roles

Key Personality Indicators[Represents distinct count of job roles, Avg.Rating,Avg.salary,count of salaries r...

Represents Average salary by job roles and titles

Represents Company names and location



A comprehensive analysis of the IT sector Salaries and Roles

Represents Average salary by job roles and titles

Represents Company names and location

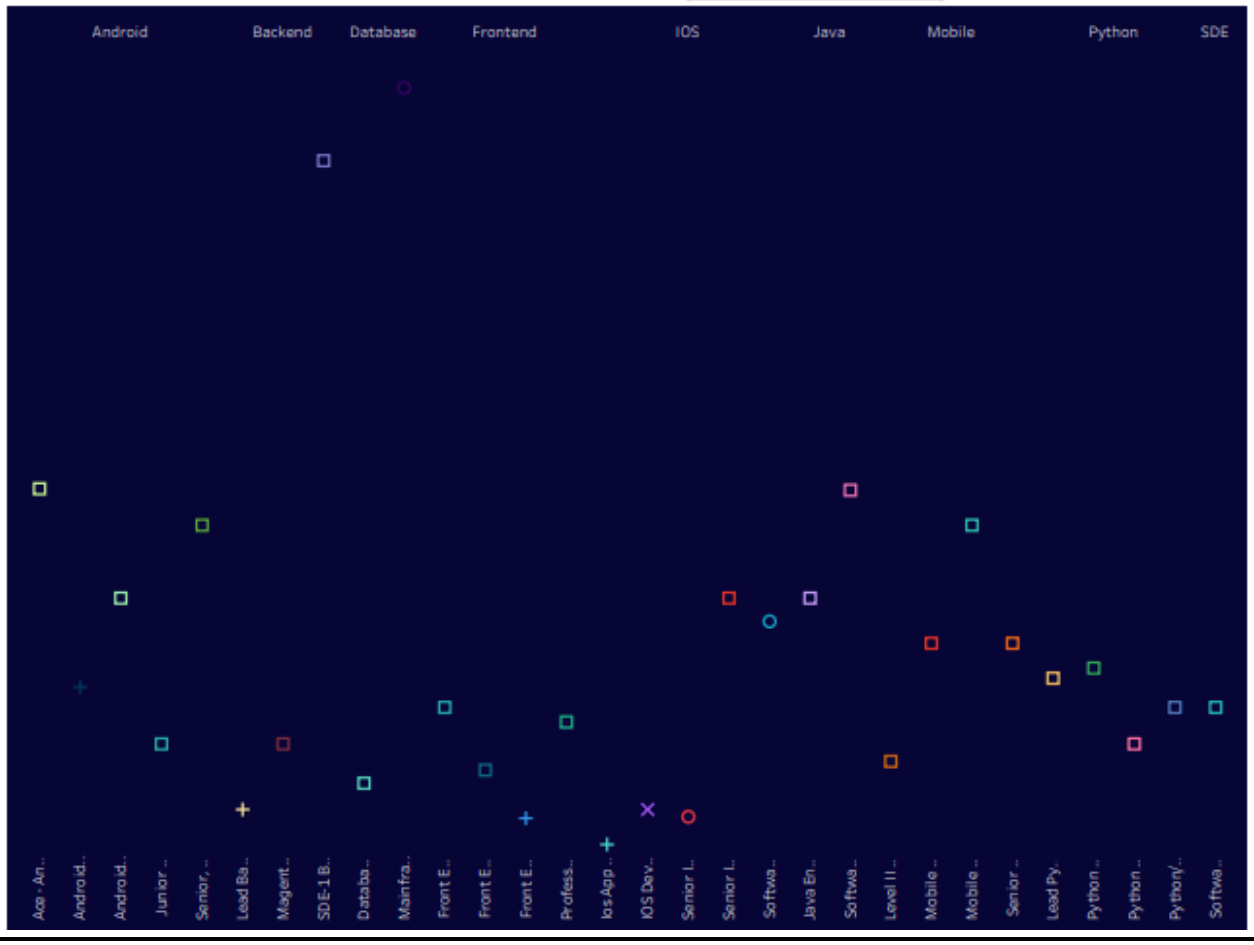
Represents employment status by job roles,job titles and average salary

Accenture	Bangalore Chennai Hyderabad New Delhi Pune
Amazon	Bangalore Chennai Hyderabad New Delhi
Capgemini	Bangalore Chennai Hyderabad New Delhi Pune
Cognizant Technology Solutions	Bangalore Chennai Hyderabad New Delhi Pune
Dell Technologies	Bangalore Chennai Hyderabad Pune
First Student	Bangalore Chennai Hyderabad New Delhi Pune
Freelancer	Bangalore Chennai Hyderabad New Delhi Pune
Fresher	Bangalore Chennai Hyderabad New Delhi Pune
Google	Bangalore Chennai Hyderabad New Delhi Pune
HCL Technologies	Bangalore Chennai Hyderabad New Delhi Pune
IBM	Bangalore Chennai Hyderabad New Delhi Pune
Infosys	Bangalore Chennai Hyderabad New Delhi Pune
LTI	Bangalore Chennai New Delhi Pune
Mindtree	Bangalore Chennai Hyderabad New Delhi Pune
Oracle	Bangalore Chennai Hyderabad Pune
Tata Consultancy Services	Bangalore Chennai Hyderabad New Delhi Pune
Tech Mahindra	Bangalore Chennai Hyderabad New Delhi Pune
Virtusa	Bangalore Chennai Hyderabad Pune
Wipro	Bangalore Chennai Hyderabad New Delhi Pune
Wipro Technologies	Bangalore Chennai Hyderabad New Delhi Pune

Represents Company names and location

Represents employment status by job roles,job titles and average salary

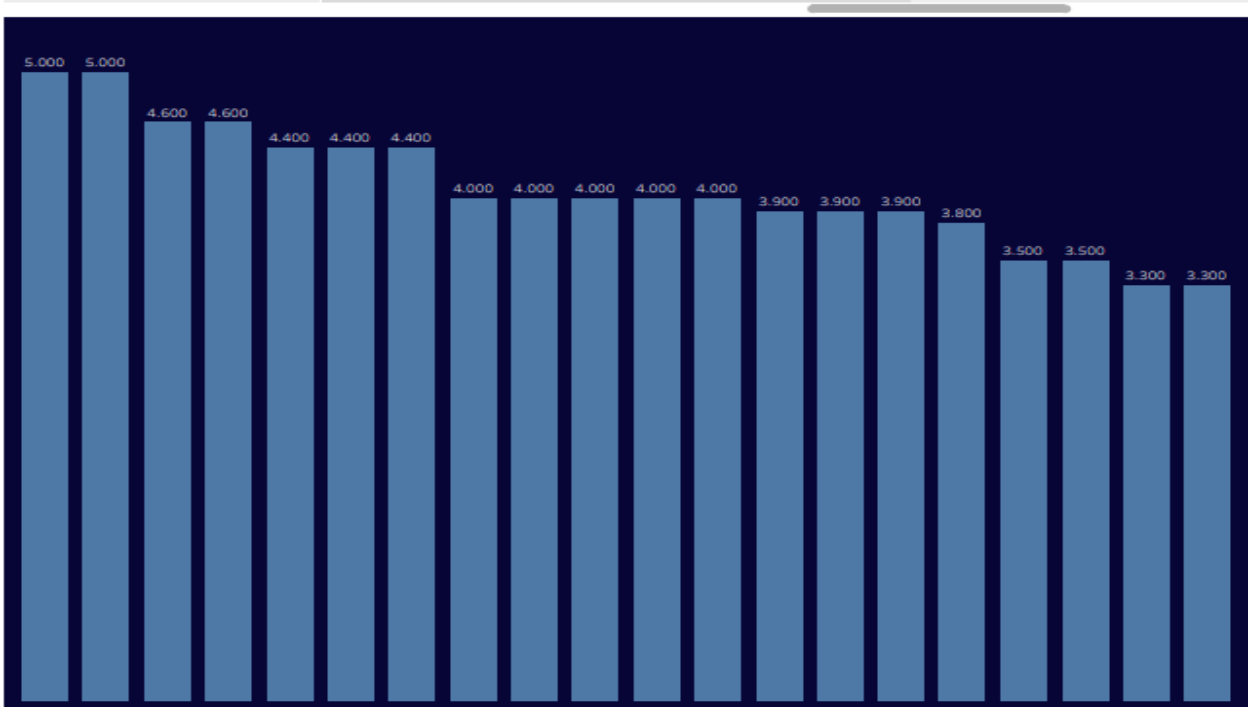
Company wise(Top 10 companies filtered by avg salary) avg rating



Represents employment status by job roles,job titles and average salary

Company wise(Top 10 companies filtered by avg salary) avg rating

Number of salaries reported by job role

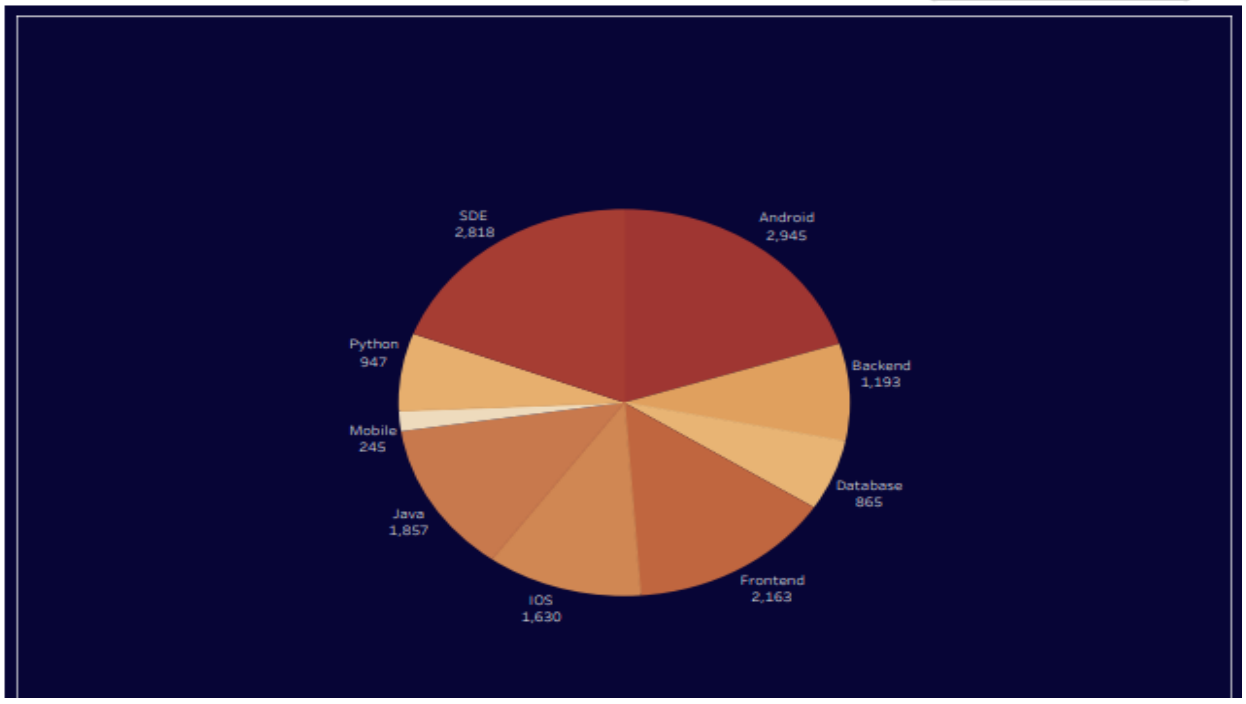


A comprehensive analysis of the IT sector Salaries and Roles

Company wise(Top 10 companies filtered by avg salary) avg rating

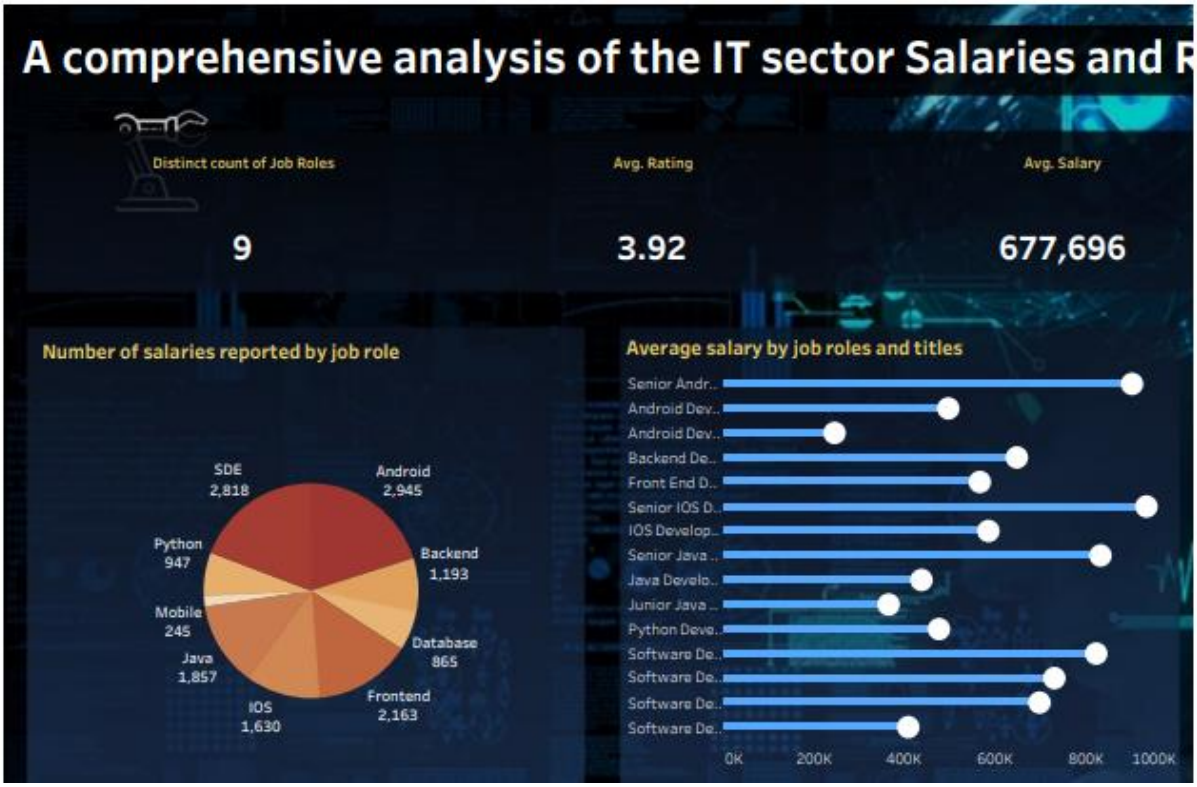
Number of salaries reported by job role

Overall Dashboard



A comprehensive analysis of the IT sector Salaries and Roles

Compa ny wis e(Top.. | Number of salaries reported by job role | Overall Dashboard



Performance Testing

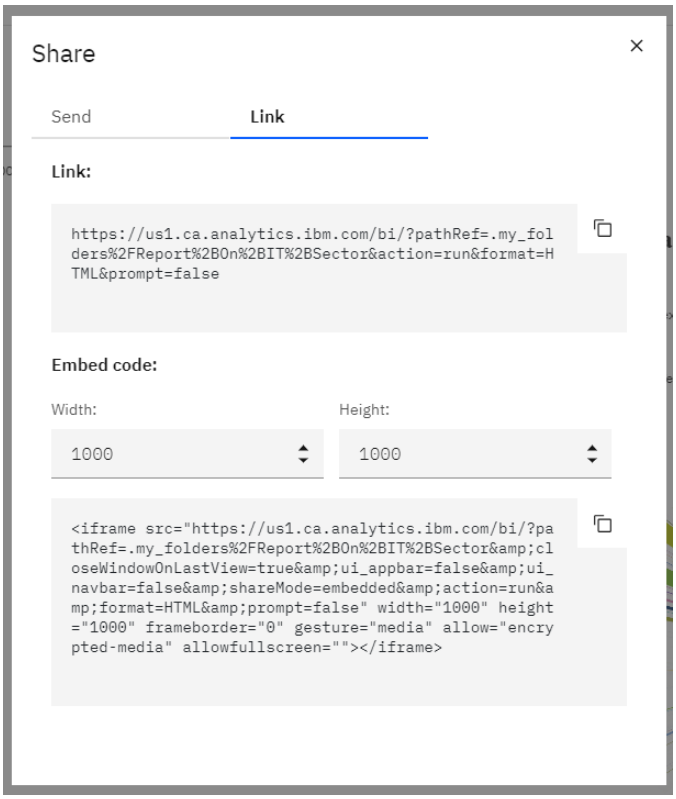
Performance testing for Tableau focuses on evaluating the software's speed, responsiveness, and scalability under various conditions and workloads. It involves measuring and analyzing key performance indicators such as query response time, data loading speed, dashboard rendering time, and concurrent user handling capacity. The testing process helps identify any performance bottlenecks, optimize system configurations, and ensure that Tableau can handle the expected workload efficiently, providing users with a smooth and responsive experience while working with large datasets and complex visualizations.

Web Integration

Publishing helps us track and monitor key performance metrics, to communicate results and progress. Help a publisher stay informed, make better decisions, and communicate their performance to others.

Integrating dashboard/reports/stories to web

Step 1: Go to Dashboard/story/report, click on share button on the top ribbon



Note: You can also change the width and height of the dashboard/story/report as you like.

Activity 1: Integrating with Tableau Public

Explanatory video:

https://drive.google.com/file/d/1zriSi_rMXmRR9Vq2S6Jb3LhbKXLhfoJJ/view?usp=sharing

Activity 2: Integrating with bootstrap website

Explanatory video:

https://drive.google.com/file/d/1OEdpDSXQNrGkpKYM0trh_7jz-6r60QPZ/view?usp=sharing

Activity 3: Implementing Flask

Explanatory video:

https://drive.google.com/file/d/1mVgBcoX17nFQLrbGQF-y0yyiw4Pw1tC-/view?usp=sharing

Activity 4: Integrating in Github Repositories and Github web pages (Additional)

Explanatory video:

https://drive.google.com/file/d/1S6-L8iWxkHm7pRH_m7yjwh-hPICR82oG/view?usp=sharing

Website Link: https://whiteknightjr.github.io/Team_95_Comprehensive_IT_Analytics/

Advantages & Disadvantages:

Advantages :

Improved Decision Making: Data analytics empowers organizations to make data-driven decisions by providing meaningful insights. It enables businesses to identify trends, patterns, and relationships in data, helping them make informed choices and develop effective strategies.

Competitive Advantage: Organizations that effectively leverage data analytics gain a competitive edge. By analyzing customer behavior, market trends, and competitors' performance, businesses can identify opportunities, optimize operations, and develop innovative products and services.

Enhanced Efficiency and Productivity: Data analytics can identify inefficiencies, bottlenecks, and areas for improvement within an organization. By streamlining processes and optimizing resource allocation, businesses can enhance efficiency and productivity, leading to cost savings and increased profitability.

Disadvantages:

Data Privacy and Security Concerns: As data analytics relies on collecting and analyzing large volumes of data, privacy and security concerns arise. Mishandling of sensitive customer information or data breaches can lead to legal consequences, damage to reputation, and loss of customer trust.

Data Quality Issues: Data analytics heavily depends on the quality of data. Inaccurate, incomplete, or inconsistent data can lead to flawed insights and erroneous decision making. Organizations need to ensure data integrity, validate data sources, and implement proper data governance practices.

Resource Requirements: Implementing data analytics solutions requires substantial resources, including skilled personnel, advanced technology infrastructure, and data storage capabilities. Small or resource-constrained organizations may face challenges in effectively adopting and utilizing data analytics.

Applications Of Data Analytics:

Business and Marketing Analytics: Data analytics helps businesses understand customer behavior, preferences, and market trends. It enables them to optimize marketing campaigns, target specific customer segments, improve customer acquisition and retention, and enhance overall business performance.

Financial Analytics: Financial institutions use data analytics to analyze market trends, detect fraud, manage risks, and make informed investment decisions. It also aids in credit scoring, financial planning, and optimizing portfolio management.

Healthcare Analytics: Data analytics plays a crucial role in healthcare, facilitating patient monitoring, disease prediction, treatment optimization, and clinical decision support. It helps identify patterns in patient data, analyze medical records, and improve healthcare outcomes and operational efficiency.

Conclusion:

In conclusion, a comprehensive analysis of the IT sector salaries and roles reveals several key findings.

Salary Range: The IT sector offers a wide range of salaries, varying based on factors such as job role, experience level, location, and industry. Senior positions, such as IT directors or software architects, tend to command higher salaries compared to entry-level or junior positions.

In-Demand Roles: Certain IT roles are in high demand due to emerging technologies and digital transformation. These include data scientists, cloud architects, cybersecurity experts, AI specialists, and full-stack developers. These roles often offer competitive salaries and attractive job prospects.

Technology Influence: The type of technology a professional specializes in can significantly impact their earning potential. Skills in areas such as cloud computing, big data analytics, machine learning, and cybersecurity are highly sought after, and professionals with expertise in these areas often command higher salaries.

Location: Salaries can vary significantly based on the geographic location. IT hubs and cities with a high cost of living, such as San Francisco, New York, or London, tend to offer higher salaries to compensate for the higher expenses. In contrast, salaries may be relatively lower in regions with a lower cost of living.

Future Scope:

The future scope of a comprehensive analysis of the IT sector salaries and roles holds several possibilities and potential developments:

Evolving Job Roles: As technology continues to advance, new job roles will emerge in the IT sector. Roles such as AI ethics specialists, quantum computing experts, blockchain developers, and augmented reality/virtual reality (AR/VR) specialists may gain prominence. Analyzing the salaries and demand for these emerging roles will provide insights into the future of the industry.

Impact of Automation and Artificial Intelligence: The increasing adoption of automation and artificial intelligence (AI) in various industries will have implications for IT roles. While some routine tasks may be automated, new roles focused on managing AI systems, developing AI algorithms, and ensuring ethical and responsible AI implementation may emerge. Analyzing the impact of automation on salaries and job roles will be crucial for understanding the changing dynamics of the IT sector.

Remote and Flexible Work Arrangements: The COVID-19 pandemic has accelerated the adoption of remote and flexible work arrangements. This trend may continue in the future, with more professionals opting for remote work or hybrid models. Analyzing the impact of remote work on salaries and the distribution of IT roles across different locations will be important for understanding the evolving work landscape.

Skill Requirements and Upskilling: Technology is evolving at a rapid pace, and IT professionals need to continuously update their skills to remain relevant. Analyzing the changing skill requirements and the correlation between skills and salaries will provide valuable insights into the future demand for specific expertise and the importance of continuous upskilling.

BIBILOGRAPHY:

References of previous works or websites visited/books referred for analysis about the project, solution previous findings etc.

Kelemen, Z., & Rumpe, B. (2015). IT Analytics: A Survey. In Proceedings of the International Conference on Advanced Information Systems Engineering (pp. 326-341). Springer.

This research paper provides an overview of IT analytics, including its concepts, challenges, and applications. It also presents a survey of IT analytics practices in organizations.

Oussous, A., Benjelloun, F. Z., Ait Lahcen, A., & Belfkih, S. (2020). Big Data analytics in IT service management: A systematic literature review. Journal of Big Data, 7(1), 32.

This article focuses on the use of big data analytics in IT service management. It presents a systematic literature review of relevant studies and provides insights into the applications, challenges, and benefits of IT analytics in this domain.

Ross, P. J., & Beath, C. M. (2016). The strategic value of IT analytics. MIS Quarterly Executive, 15(4), 243-258.

This publication explores the strategic value of IT analytics and its impact on organizational decision making. It discusses various aspects of IT analytics, including data governance, analytics capabilities, and the integration of analytics into business processes.

Peterson, B. (2017). IT analytics for Dummies. John Wiley & Sons.

This book provides a comprehensive introduction to IT analytics, covering topics such as data collection, analysis techniques, visualization, and the application of analytics in IT operations and security.

IT Governance Institute. (2011). Using COBIT 5 for IT Analytics. IT Governance Institute.

This guide from the IT Governance Institute introduces the concept of IT analytics using the COBIT 5 framework. It explains how organizations can leverage IT analytics to improve decision making, performance measurement, and risk management.

APPENDIX

A. Source Code

Index(html):

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>A comprehensive analysis of the IT sector Salaries and Roles Website - Index</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="static/assets/img/favicon.png" rel="icon">
  <link href="static/assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i,700,700i|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,400,400i,500,500i,600,600i,700,700i" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <link href="static/assets/vendor/animate.css/animate.min.css" rel="stylesheet">
  <link href="static/assets/vendor/aos/aos.css" rel="stylesheet">
```

```
  <link href="static/assets/vendor/bootstrap/css/bootstrap.min.css"
rel="stylesheet">
  <link href="static/assets/vendor/bootstrap-icons/bootstrap-icons.css"
rel="stylesheet">
  <link href="static/assets/vendor/boxicons/css/boxicons.min.css"
rel="stylesheet">
  <link href="static/assets/vendor/glightbox/css/glightbox.min.css"
rel="stylesheet">
  <link href="static/assets/vendor/remixicon/remixicon.css" rel="stylesheet">
  <link href="static/assets/vendor/swiper/swiper-bundle.min.css"
rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="static/assets/css/style.css" rel="stylesheet">

  <!-- =======================================================
  * Template Name: Anyar
  * Updated: May 30 2023 with Bootstrap v5.3.0
  * Template URL: https://bootstrapmade.com/anyar-free-multipurpose-one-page-
bootstrap-theme/
  * Author: BootstrapMade.com
  * License: https://bootstrapmade.com/license/
  ======================================================= -->
</head>

<body>

  <!-- ======= Top Bar ======= -->
  <div id="topbar" class="fixed-top d-flex align-items-center ">
    <div class="container d-flex align-items-center justify-content-center
justify-content-md-between">
      <div class="contact-info d-flex align-items-center">
        <i class="bi bi-envelope-fill"></i><a
href="mailto:contact@example.com">harinarayanan.m2020@vitstudent.ac.in</a>
        <i class="bi bi-phone-fill phone-icon"></i> +91 9500400877
      </div>
      <div class="cta d-none d-md-block">
        <a href="#about" class="scrollto">Get Started</a>
      </div>
    </div>
  </div>

  <!-- ======= Header ======= -->
  <header id="header" class="fixed-top d-flex align-items-center ">
    <div class="container d-flex align-items-center justify-content-between">
```

```
      <h1 class="logo"><a href="index.html">IT Sector Analytics</a></h1>
      <!-- Uncomment below if you prefer to use an image logo -->
      <!-- <a href=index.html" class="logo"><img src="assets/img/logo.png" alt=""
class="img-fluid"></a>-->

      <nav id="navbar" class="navbar">
        <ul>
          <li><a class="nav-link scrollto active" href="#hero">Home</a></li>
          <li><a class="nav-link scrollto" href="#about">About</a></li>
          <li><a class="nav-link scrollto" href="#services">Services</a></li>


          <li><a class="nav-link scrollto" href="#portfolio">Dashboards</a></li>
          <li><a class="nav-link scrollto" href="#team">Stories</a></li>

          <li><a class="nav-link scrollto" href="#contact">Contact</a></li>
        </ul>
        <i class="bi bi-list mobile-nav-toggle"></i>
      </nav><!-- .navbar -->

    </div>
  </header><!-- End Header -->

  <!-- ======= Hero Section ======= -->
  <section id="hero" class="d-flex justify-cntent-center align-items-center">
    <div id="heroCarousel" data-bs-interval="5000" class="container carousel
carousel-fade" data-bs-ride="carousel">

      <!-- Slide 1 -->
      <div class="carousel-item active">
        <div class="carousel-container">
          <h2 class="animate__animated animate__fadeInDown">Welcome to <span>Our
Website</span></h2>
          <p class="animate__animated animate__fadeInUp">The IT sector
encompasses a wide range of job roles, each with its own unique set of skills,
responsibilities, and corresponding salary levels. Below is a comprehensive
analysis of the IT sector salaries and role descriptions across different levels
of expertise and experience. Please note that salary ranges can vary
significantly depending on factors such as location, company size, industry, and
individual qualifications.</p>
          <a href="#about" class="btn-get-started animate__animated
animate__fadeInUp scrollto">Read More</a>
        </div>
      </div>
```

```
      <!-- Slide 2 -->
      <div class="carousel-item">
        <div class="carousel-container">
          <h2 class="animate__animated animate__fadeInDown">General Role
Description</h2>
          <p class="animate__animated animate__fadeInUp">The IT sector
encompasses a wide range of roles. Help Desk Technicians/Support provide
technical assistance to end-users. Software Developers/Engineers design and
develop software applications. Network Administrators manage and troubleshoot
computer networks. Database Administrators handle database design and management.
Web Developers create and maintain websites and web applications. IT Project
Managers oversee and manage IT projects. Cybersecurity Analysts protect systems
from security threats. Data Scientists analyze complex data sets. Cloud
Architects design and manage cloud infrastructure. AI/Machine Learning Engineers
develop AI models. Blockchain Developers build decentralized applications. DevOps
Engineers automate software development and operations. These roles showcase the
diverse expertise required to drive technology advancements in the IT
industry..</p>
          <a href="#about" class="btn-get-started animate__animated
animate__fadeInUp scrollto">Read More</a>
        </div>
      </div>


      <a class="carousel-control-prev" href="#heroCarousel" role="button" data-
bs-slide="prev">
        <span class="carousel-control-prev-icon bx bx-chevron-left" aria-
hidden="true"></span>
      </a>

      <a class="carousel-control-next" href="#heroCarousel" role="button" data-
bs-slide="next">
        <span class="carousel-control-next-icon bx bx-chevron-right" aria-
hidden="true"></span>
      </a>

    </div>
  </section><!-- End Hero -->

  <main id="main">

    <!-- ======= Icon Boxes Section ======= -->
    <section id="icon-boxes" class="icon-boxes">
      <div class="container">
```

```
        <div class="row">
          <div class="col-md-6 col-lg-3 d-flex align-items-stretch mb-5 mb-lg-0"
data-aos="fade-up">
            <div class="icon-box">
              <div class="icon"><i class="bx bxl-dribbble"></i></div>
              <h4 class="title"><a href="">Entry-level Roles</a></h4>
              <p class="description">Entry-level roles in the IT sector provide a
foundation for aspiring professionals. Help Desk Technicians/Support offer
technical assistance and resolve issues for end-users. Junior Software
Developers/Engineers assist in software development tasks under senior guidance.
Network Administrators manage and maintain computer networks. Quality Assurance
(QA) Testers ensure software functionality meets standards. These roles offer
opportunities to gain hands-on experience, develop technical skills, and pave the
way for career growth in the IT industry.</p>
            </div>
          </div>

          <div class="col-md-6 col-lg-3 d-flex align-items-stretch mb-5 mb-lg-0"
data-aos="fade-up" data-aos-delay="100">
            <div class="icon-box">
              <div class="icon"><i class="bx bx-file"></i></div>
              <h4 class="title"><a href="">Mid-level Roles</a></h4>
              <p class="description">Mid-level roles in the IT sector involve
more responsibility and expertise. Systems Administrators handle the setup and
maintenance of IT systems and networks. Database Administrators (DBAs) manage
databases, ensuring data integrity and security. Web Developers design and
develop websites and web applications. IT Project Managers oversee and manage IT
projects, ensuring successful completion. These roles require a deeper
understanding of their respective domains, and professionals in these positions
contribute to the efficient functioning and implementation of IT solutions within
organizations.</p>
            </div>
          </div>

          <div class="col-md-6 col-lg-3 d-flex align-items-stretch mb-5 mb-lg-0"
data-aos="fade-up" data-aos-delay="200">
            <div class="icon-box">
              <div class="icon"><i class="bx bx-tachometer"></i></div>
              <h4 class="title"><a href="">Senior-level Roles</a></h4>
              <p class="description">Senior-level roles in the IT sector entail
strategic leadership and advanced expertise. Senior Software Engineers/Developers
lead complex software development projects and make critical technical decisions.
IT Security Managers implement and oversee security measures to protect
organizations' IT infrastructure and data. Data Scientists analyze complex data
```

```
sets and provide valuable insights for business decision-making. IT
Directors/Chief Information Officers (CIOs) oversee the entire IT function,
aligning IT strategies with business objectives. These roles require extensive
experience, strong leadership skills, and the ability to drive innovation and
organizational growth through technology.</p>
            </div>
          </div>

          <div class="col-md-6 col-lg-3 d-flex align-items-stretch mb-5 mb-lg-0"
data-aos="fade-up" data-aos-delay="300">
            <div class="icon-box">
              <div class="icon"><i class="bx bx-layer"></i></div>
              <h4 class="title"><a href="">Specialized Roles</a></h4>
              <p class="description">Specialized roles in the IT sector require
advanced knowledge and expertise in specific areas. Cloud Architects design and
manage cloud-based infrastructure and solutions. AI/Machine Learning Engineers
develop and deploy AI and machine learning models to solve complex problems.
Blockchain Developers build decentralized applications and implement blockchain
solutions. DevOps Engineers combine software development and IT operations to
ensure efficient software deployment and infrastructure management. These roles
demand specialized skills and a deep understanding of emerging technologies,
enabling organizations to leverage cutting-edge solutions for enhanced
performance and innovation.</p>
            </div>
          </div>

        </div>

      </div>
    </section><!-- End Icon Boxes Section -->

    <!-- ======= About Us Section ======= -->
    <section id="about" class="about">
      <div class="container" data-aos="fade-up">

        <div class="section-title">
          <h2>About Us</h2>
          <p>Students with a passion for data analytics from Vellore Institute of
Technology (VIT) University equipped with a strong foundation in analytics and
the skills needed to navigate the data-driven world.</p>
        </div>

        <div class="row content">
          <div class="col-lg-6">
            <p>
```

```
            We hustle to gain expertise in utilizing tools and techniques to
extract valuable insights from complex data sets, enabling them to make informed
business decisions.
          </p>
          <ul>
            <li><i class="ri-check-double-line"></i>Experienced working in
Tableau</li>
            <li><i class="ri-check-double-line"></i> Experienced working in
Microsoft Power Bi</li>
            <li><i class="ri-check-double-line"></i> Experienced working in IBM
Cognos</li>
          </ul>
        </div>
        <div class="col-lg-6 pt-4 pt-lg-0">
          <p>
            With our passion and education we are well-prepared to excel in
data analytics roles and contribute to the rapidly evolving field of data-driven
decision-making.
          </p>
          <a href="#" class="btn-learn-more">Learn More</a>
        </div>
      </div>

    </div>
  </section><!-- End About Us Section -->

  <!-- ======= Services Section ======= -->
  <section id="services" class="services">
    <div class="container" data-aos="fade-up">

      <div class="section-title">
        <h2>Services</h2>
        <p>Data analytics services encompass a range of offerings designed to
help organizations leverage their data for insights and decision-making. Here are
some of our common services offered in data analytics.</p>
      </div>

      <div class="row">
        <div class="col-md-6 d-flex align-items-stretch" data-aos="fade-up"
data-aos-delay="100">
          <div class="icon-box">
            <i class="bi bi-card-checklist"></i>
            <h4><a href="#">Data Analysis and Reporting</a></h4>
```

```
              <p>Analyzing data sets to identify patterns, trends, and
correlations, and generating reports to provide actionable insights for business
decision-making.</p>
            </div>
          </div>
          <div class="col-md-6 d-flex align-items-stretch mt-4 mt-md-0" data-
aos="fade-up" data-aos-delay="200">
            <div class="icon-box">
              <i class="bi bi-bar-chart"></i>
              <h4><a href="#">Predictive Analytics</a></h4>
              <p>Utilizing statistical models and machine learning algorithms to
predict future outcomes, anticipate trends, and optimize business strategies.</p>
            </div>
          </div>
          <div class="col-md-6 d-flex align-items-stretch mt-4 mt-md-0" data-
aos="fade-up" data-aos-delay="300">
            <div class="icon-box">
              <i class="bi bi-binoculars"></i>
              <h4><a href="#">Data Visualization</a></h4>
              <p>Creating visually appealing and interactive dashboards, charts,
and graphs to present data in a user-friendly and easily understandable
format.</p>
            </div>
          </div>
          <div class="col-md-6 d-flex align-items-stretch mt-4 mt-md-0" data-
aos="fade-up" data-aos-delay="400">
            <div class="icon-box">
              <i class="bi bi-brightness-high"></i>
              <h4><a href="#">Data Strategy and Consulting</a></h4>
              <p>Providing strategic guidance and consulting services to help
organizations develop data-driven strategies, establish data frameworks, and
align analytics initiatives with business goals.</p>
            </div>
          </div>

        </div>

      </div>
    </section><!-- End Services Section -->

    <!-- ======= Cta Section ======= -->
    <section id="cta" class="cta">
      <div class="container">

        <div class="row" data-aos="zoom-in">
```

```
          <div class="col-lg-9 text-center text-lg-start">
            <h3>Call To Action</h3>
            <p> Unleash the Power of Data Analytics Today!

Are you ready to unlock the true potential of your data? Take the leap into the world of data analytics and revolutionize your business decisions. Here's your call to action</p>
          </div>
          <div class="col-lg-3 cta-btn-container text-center">
            <a class="cta-btn align-middle" href="#">Call To Action</a>
          </div>
        </div>

      </div>
    </section><!-- End Cta Section -->

    <!-- ======= Portfoio Section ======= -->
    <section id="portfolio" class="portfoio">
      <div class="container" data-aos="fade-up">

        <div class="section-title">
          <h2>Dashboard</h2>
          <p>A Comprehensive Analysis On IT Sector Salaries And Roles Dashboard</p>
        </div>

        <div class='tableauPlaceholder' id='viz1687373052789' style='position: relative'><noscript><a href='#'><img alt='Dashboard 1 ' src='https:&#47;&#47;public.tableau.com&#47;static&#47;images&#47;Ac&#47;AcomprehensiveanalysisoftheITsectorSalariesandRoles_By_20BEC115620BLC108620BCE257420BEI0061&#47;Dashboard1&#47;1_rss.png' style='border: none' /></a></noscript><object class='tableauViz'  style='display:none;'><param name='host_url' value='https%3A%2F%2Fpublic.tableau.com%2F' /> <param name='embed_code_version' value='3' /> <param name='site_root' value='' /><param name='name' value='AcomprehensiveanalysisoftheITsectorSalariesandRoles_By_20BEC115620BLC108620BCE257420BEI0061&#47;Dashboard1' /><param name='tabs' value='no' /><param name='toolbar' value='yes' /><param name='static_image' value='https:&#47;&#47;public.tableau.com&#47;static&#47;images&#47;Ac&#47;AcomprehensiveanalysisoftheITsectorSalariesandRoles_By_20BEC115620BLC108620BCE257420BEI0061&#47;Dashboard1&#47;1.png' /> <param name='animate_transition' value='yes' /><param name='display_static_image' value='yes' /><param name='display_spinner' value='yes' /><param name='display_overlay' value='yes' /><param name='display_count' value='yes' /><param name='language' value='en-US' /></object></div>                <script type='text/javascript'>                    var divElement =
```

```
document.getElementById('viz1687373052789');                    var vizElement =
divElement.getElementsByTagName('object')[0];                    if (
divElement.offsetWidth > 800 ) {
vizElement.style.width='1016px';vizElement.style.height='991px';} else if (
divElement.offsetWidth > 500 ) {
vizElement.style.width='1016px';vizElement.style.height='991px';} else {
vizElement.style.width='100%';vizElement.style.height='2727px';}
    var scriptElement =
document.createElement('script');                    scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';                    vizEle
ment.parentNode.insertBefore(scriptElement, vizElement);                </script>
      </div>
    </section><!-- End Portfoio Section -->

    <!-- ======= Team Section ======= -->
    <section id="team" class="team section-bg">
      <div class="container" data-aos="fade-up">

        <div class="section-title">
          <h2>Story</h2>
          <p>A Comprehensive Analysis On IT Sector Salaries And Roles Story</p>
        </div>
        <div class='tableauPlaceholder' id='viz1687374015492' style='position:
relative'><noscript><a href='#'><img alt='A comprehensive analysis of the IT
sector Salaries and Roles '
src='https:&#47;&#47;public.tableau.com&#47;static&#47;images&#47;Ac&#47;Acompreh
ensiveanalysisoftheITsectorSalariesandRoles_By_20BEC115620BLC108620BCE257420BEI00
61_Story&#47;Story12&#47;1_rss.png' style='border: none' /></a></noscript><object
class='tableauViz'  style='display:none;'><param name='host_url'
value='https%3A%2F%2Fpublic.tableau.com%2F' /> <param name='embed_code_version'
value='3' /> <param name='site_root' value='' /><param name='name'
value='AcomprehensiveanalysisoftheITsectorSalariesandRoles_By_20BEC115620BLC10862
0BCE257420BEI0061_Story&#47;Story12' /><param name='tabs' value='no' /><param
name='toolbar' value='yes' /><param name='static_image'
value='https:&#47;&#47;public.tableau.com&#47;static&#47;images&#47;Ac&#47;Acompr
ehensiveanalysisoftheITsectorSalariesandRoles_By_20BEC115620BLC108620BCE257420BEI
0061_Story&#47;Story12&#47;1.png' /> <param name='animate_transition' value='yes'
/><param name='display_static_image' value='yes' /><param name='display_spinner'
value='yes' /><param name='display_overlay' value='yes' /><param
name='display_count' value='yes' /><param name='language' value='en-US'
/></object></div>                <script
type='text/javascript'>                    var divElement =
document.getElementById('viz1687374015492');                    var vizElement =
divElement.getElementsByTagName('object')[0];                    vizElement.style
.width='1016px';vizElement.style.height='991px';                    var
```

```
scriptElement =
document.createElement('script');                    scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';                    vizEle
ment.parentNode.insertBefore(scriptElement, vizElement);                </script>


      </div>
    </section><!-- End Team Section -->


    <!-- ======= Contact Section ======= -->
    <section id="contact" class="contact">
      <div class="container" data-aos="fade-up">

        <div class="section-title">
          <h2>Contact Us</h2>
        </div>

        <div class="row mt-1 d-flex justify-content-end" data-aos="fade-right"
data-aos-delay="100">

          <div class="col-lg-5">
            <div class="info">
              <div class="address">
                <i class="bi bi-geo-alt"></i>
                <h4>Location:</h4>
                <p>Vellore Institute Of Technology</p>
              </div>

              <div class="email">
                <i class="bi bi-envelope"></i>
                <h4>Email:</h4>
                <p>harinarayanan.m2020@vitstudent.ac.in
                   santhosh.s2020@vitstudent.ac.in
                   rajarshi.bose2020@vitstudent.ac.in
                   navrang.dv2020@vitstudent.ac.in

                </p>
              </div>

              <div class="phone">
                <i class="bi bi-phone"></i>
                <h4>Call:</h4>
                <p>+91 9500400877/
                   +91 9791139835/
```

```
                  +91 9731173375/
                  +91 9361377749
                </p>
              </div>

            </div>

          </div>

          <div class="col-lg-6 mt-5 mt-lg-0" data-aos="fade-left" data-aos-
delay="100">

            <form action="forms/contact.php" method="post" role="form"
class="php-email-form">
              <div class="row">
                <div class="col-md-6 form-group">
                  <input type="text" name="name" class="form-control" id="name"
placeholder="Your Name" required>
                </div>
                <div class="col-md-6 form-group mt-3 mt-md-0">
                  <input type="email" class="form-control" name="email"
id="email" placeholder="Your Email" required>
                </div>
              </div>
              <div class="form-group mt-3">
                <input type="text" class="form-control" name="subject"
id="subject" placeholder="Subject" required>
              </div>
              <div class="form-group mt-3">
                <textarea class="form-control" name="message" rows="5"
placeholder="Message" required></textarea>
              </div>
              <div class="my-3">
                <div class="loading">Loading</div>
                <div class="error-message"></div>
                <div class="sent-message">Your message has been sent. Thank
you!</div>
              </div>
              <div class="text-center"><button type="submit">Send
Message</button></div>
            </form>

          </div>

        </div>
```

```
      </div>
    </section><!-- End Contact Section -->

  </main><!-- End #main -->

  <!-- ======= Footer ======= -->
  <footer id="footer">

    <div class="footer-newsletter">
      <div class="container">
        <div class="row">
          <div class="col-lg-6">
            <h4>Our Newsletter</h4>
            <p>We will provide quality service based on your needs</p>
          </div>
          <div class="col-lg-6">
            <form action="" method="post">
              <input type="email" name="email"><input type="submit"
value="Subscribe">
            </form>
          </div>
        </div>
      </div>
    </div>

    <div class="footer-top">
      <div class="container">
        <div class="row">

          <div class="col-lg-3 col-md-6 footer-links">
            <h4>Useful Links</h4>
            <ul>
              <li><i class="bx bx-chevron-right"></i> <a href="#">Home</a></li>
              <li><i class="bx bx-chevron-right"></i> <a href="#">About
us</a></li>
              <li><i class="bx bx-chevron-right"></i> <a
href="#">Services</a></li>
              <li><i class="bx bx-chevron-right"></i> <a href="#">Terms of
service</a></li>
              <li><i class="bx bx-chevron-right"></i> <a href="#">Privacy
policy</a></li>
            </ul>
          </div>
```

```
          <div class="col-lg-3 col-md-6 footer-links">
            <h4>Our extra Services</h4>
            <ul>
              <li><i class="bx bx-chevron-right"></i> <a href="#">Web
Design</a></li>
              <li><i class="bx bx-chevron-right"></i> <a href="#">Web
Development</a></li>
              <li><i class="bx bx-chevron-right"></i> <a href="#">Product
Management</a></li>
              <li><i class="bx bx-chevron-right"></i> <a
href="#">Marketing</a></li>
              <li><i class="bx bx-chevron-right"></i> <a href="#">Graphic
Design</a></li>
            </ul>
          </div>

          <div class="col-lg-3 col-md-6 footer-contact">
            <h4>Contact Us</h4>
            <p>
              <strong>Location:</strong><br>Vellore Institute Of Technology<br>
              <strong>Phone:</strong> <br>+91 9500400877<br>+91 9791139835<br>
              +91 9731173375<br>
              +91 9361377749<br>
              <strong>Email:</strong><br>
harinarayanan.m2020@vitstudent.ac.in<br>
              santhosh.s2020@vitstudent.ac.in<br>
                   rajarshi.bose2020@vitstudent.ac.in<br>
                   navrang.dv2020@vitstudent.ac.in
            </p>

          </div>

          <div class="col-lg-3 col-md-6 footer-info">
            <h3>About</h3>
            <p>Students with a passion for data analytics from Vellore Institute
of Technology (VIT) University equipped with a strong foundation in analytics and
the skills needed to navigate the data-driven world.</p>
            <div class="social-links mt-3">
              <a href="#" class="twitter"><i class="bx bxl-twitter"></i></a>
              <a href="#" class="facebook"><i class="bx bxl-facebook"></i></a>
              <a href="#" class="instagram"><i class="bx bxl-instagram"></i></a>
              <a href="#" class="google-plus"><i class="bx bxl-skype"></i></a>
              <a href="#" class="linkedin"><i class="bx bxl-linkedin"></i></a>
            </div>
          </div>
```

```
        </div>
      </div>
    </div>

    <div class="container">
      <div class="copyright">
        &copy; Copyright <strong><span>Team-95</span></strong>. All Rights
Reserved
      </div>
      <div class="credits">
        <!-- All the links in the footer should remain intact. -->
        <!-- You can delete the links only if you purchased the pro version. -->
        <!-- Licensing information: https://bootstrapmade.com/license/ -->
        <!-- Purchase the pro version with working PHP/AJAX contact form:
https://bootstrapmade.com/anyar-free-multipurpose-one-page-bootstrap-theme/ -->
        Designed by <a href="https://bootstrapmade.com/">BootstrapMade</a>
      </div>
    </div>
  </footer><!-- End Footer -->

  <div id="preloader"></div>
  <a href="#" class="back-to-top d-flex align-items-center justify-content-
center"><i class="bi bi-arrow-up-short"></i></a>

  <!-- Vendor JS Files -->
  <script src="static/assets/vendor/aos/aos.js"></script>
  <script
src="static/assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
  <script src="static/assets/vendor/glightbox/js/glightbox.min.js"></script>
  <script src="static/assets/vendor/isotope-layout/isotope.pkgd.min.js"></script>
  <script src="static/assets/vendor/swiper/swiper-bundle.min.js"></script>
  <script src="static/assets/vendor/php-email-form/validate.js"></script>

  <!-- Template Main JS File -->
  <script src="static/assets/js/main.js"></script>

</body>

</html>
```

Flask:

```python
# Importing flask module in the project is mandatory
# An object of Flask class is our WSGI application.
from flask import Flask, redirect,url_for, render_template

# Flask constructor takes the name of
# current module (__name__) as argument.
app = Flask(__name__)

# The route() function of the Flask class is a decorator,
# which tells the application which URL should call
# the associated function.
@app.route("/")

# ‘/’ URL is bound with hello_world() function.
def main():
    return render_template(r"index.html")

# main driver function
if __name__ == '__main__':

    # run() method of Flask class runs the application
    # on the local development server.
    app.run(debug=False,port=8000)
```