

## **LinkedIn Job Analysis Dashboard**

## The domain of the Project

LinkedIn Jobs Analysis
Dashboard Using
(Power BI)

## Under the guidance of

Mrs.Siddhika Shah

By

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Period of the project February 2025 to March 2025



SURE TRUST PUTTAPARTHI,
ANDHRA PRADESH



## **DECLARATION**

The project titled "LinkedIn Job Analysis Using Power BI" has been mentored by Mrs. Siddhika Shah and organized by SURE Trust from February 2025 to March 2025. This initiative aims to benefit educated unemployed rural youth by providing hands-on experience in industry-relevant projects, thereby enhancing employability.

I, Mrs. Siddhika Shah, hereby declare that I have solely worked on this project under the guidance of my mentor. This project has significantly enhanced my practical knowledge and skills in the domain.

Name

Ms. Bodiga Sumanjali

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## **Executive Summary**

The LinkedIn Job Analysis Dashboard was developed using Power BI to analyze job trends, in-demand skills, company hiring behavior, and job roles posted on LinkedIn. It provides a visual summary of job openings by category, location, company, and skillset, enabling students and job seekers to identify market demand. The dashboard offers filters to explore by skill, domain, and experience level, supporting better job planning and career strategy.



## **Introduction**

## **Background and Context**

The job market is continuously evolving with the emergence of new technologies, evolving business demands, and dynamic candidate expectations. For job seekers, staying updated with trending skills, most hired roles, and key hiring organizations is essential for career planning. Platforms like LinkedIn provide extensive job postings, but they lack analytical tools to extract meaningful insights. This project addresses this gap by developing a Business Intelligence dashboard using Power BI to visualize and explore LinkedIn job data. The aim is to create an accessible tool that turns raw job listings into valuable career insights.

#### **Problem Statement**

Although LinkedIn hosts millions of job postings, it does not offer a comprehensive way to analyze or compare job trends over time or across industries. Job seekers often spend hours browsing posts without gaining clarity on skill demands or hiring patterns. This project solves that issue by converting job listing data into a Power BI dashboard that offers summarized visuals and interactive filtering. It allows users to identify trends, compare roles, and understand what skills are most in demand—all from a single platform.

## Scope

This project focuses on job data extracted from LinkedIn, including fields such as job title, company name, location, required skills, domain, and experience level. The Power BI dashboard enables users to analyze data across multiple dimensions like city, company, role, and skill. While the scope is limited to static, preprocessed data, it provides a comprehensive view of hiring patterns during the selected time frame.



#### Limitations

The current version of the dashboard operates on a static dataset, meaning that the information represents only a snapshot in time. Real-time job updates or live API integration is not part of the current implementation. Also, the dashboard lacks predictive capabilities for forecasting future job trends. The data being sourced from publicly available listings may also introduce bias, as it does not include confidential or niche hiring practices.

#### **Innovation**

This project is unique in its ability to provide a 360-degree view of Amazon sales performance using Power BI. It integrates various data fields—such as product categories, city-wise sales, customer reviews, and delivery statuses—into a cohesive visual format. By using DAX measures and interactive visuals, the dashboard empowers users to make data-backed decisions quickly. The automation of insights and the visual storytelling element make this project a valuable tool for e-commerce analysis and future BI enhancements.



## **Project Objectives**

## **Project Objectives:**

#### 1. Data Cleaning and Preparation

To preprocess and transform raw datasets into a structured format suitable for analysis in Power BI. This includes handling missing values, renaming columns, changing data types, and creating calculated columns/measures using DAX.

#### 2. Data Modeling

To establish relationships between different tables such as sales data, product details, and shipping status. This step ensures that slicers and visuals work cohesively and allows for dynamic filtering across the dashboard.

#### 3. Visual Design and Layout

To create an intuitive and visually appealing dashboard by organizing charts, tables, slicers, and KPIs in a clean layout. Emphasis is placed on clarity, interactivity, and ease of navigation between multiple report pages.

#### 4. DAX Measures and Calculations

To develop meaningful calculations using DAX formulas, such as total sales, total units, returns, and customer reviews. These measures provide business-specific insights and allow users to compare performance across different dimensions.

#### 5. Interactive Features and Filters

To enable interactivity through slicers (e.g., date, category, status) and navigation buttons. These features empower users to explore data dynamically and focus on specific subsets of interest without modifying the underlying dataset.



## **Expected Outcomes:**

## Sales Dashboard showing:

- Overall and filtered sales values
- Units sold and return (lost) statistics
- Sales distribution across states and cities
- Time-based sales patterns (monthly trends)

## **Product Dashboard revealing:**

- Best-selling products and categories
- Number of customer reviews per product
- Product-wise performance comparison
- Insights based on shipping and order status

## **Operational Benefits:**

- Improved business insights for stakeholders through intuitive visuals and dynamic filters
  - Enhanced decision-making by minimizing the need for manual data analysis
- A scalable Power BI solution that can be updated easily with new datasets or extended with features like trend forecasting or automated alerts.



## **Methodology and Results**

## Methods/Technology Used:

The project applies Data Analytics and Business Intelligence (BI) methodologies to transform raw Amazon sales data into meaningful insights. It includes:

- **Data preprocessing**: Cleaning and transforming the sales, product, and order status data using Power Query Editor in Power BI.
- **Data modeling**: Establishing relationships between tables (e.g., sales, products, reviews, and shipping), and creating DAX measures for calculations like total sales, units, and returns.
- **Interactive visualization**: Utilizing bar charts, line graphs, slicers, and buttons to uncover patterns in sales trends, product performance, and regional distribution.
- **Descriptive analysis**: Summarizing sales history to show what products and locations contributed most to revenue and units sold.
- **Diagnostic analysis**: Analyzing returns, reviews, and delivery statuses to understand potential issues in sales or logistics performance.

#### **Tools/Software Used:**

- **Microsoft Power BI Desktop**: Primary tool for dashboard creation, data modeling, and interactive visualization.
- **Power Query Editor**: Used for cleaning, filtering, and shaping the data before analysis.
- DAX (Data Analysis Expressions): For creating custom KPIs, aggregations, and calculations.
- Excel/CSV Files: Data source format used for importing Amazon sales and product data.
- MS Excel or Google Sheets: For initial inspection or minor data adjustments before loading into Power BI.



## **Data Collection Approach:**

The data used for this project was manually collected from public LinkedIn job postings. Care was taken to include a variety of job listings across different companies, locations, and domains.

## **Key steps:**

- Collected data fields include:
  - Job Title
  - o Company Name
  - **o** Location (City, State)
  - **o** Experience Required
  - Skills Mentioned
- The raw data was structured into tabular format and exported as a **CSV file**.
- Preprocessing was done in **Microsoft Excel** to remove missing values, format dates, categorize job types, and standardize company names and skills.

## **6.4 Project Architecture**

The architectural flow of the LinkedIn Job Analysis Dashboard project is as follows:

#### 1. Data Collection

 Job listings were manually extracted from LinkedIn based on filters like date posted, job type, and experience level.

## 2. Excel Preprocessing

- Data was cleaned to remove duplicates, incomplete entries, and outliers.
- Columns were standardized, and categorical fields were encoded where necessary.

## 3. Import into Power BI

- The cleaned Excel sheet was loaded into Power BI Desktop.
- o Tables and relationships were established.

## 4. Data Modeling & DAX Implementation

- o Measures and calculated columns were created using DAX.
- $\circ\quad Example\ KPIs:\ Total\ Jobs,\ Unique\ Companies,\ Most\ Common\ Skills.$

## 5. Visualization Design

- Visual elements such as pie charts, bar charts, stacked columns, and card tiles were created.
- Filters and slicers for **role**, **skill**, **location**, **company**, and **experience level** were added for interactive exploration.

## 6. Filtering and Drilldown

- o Users can dynamically explore trends based on their interests.
- Multi-level drilldowns and interactive slicers enhance the dashboard's usability and depth of insights.

Results\_

The dashboard yielded several valuable insights based on the analyzed LinkedIn job data. The most frequently mentioned technical skills across job postings included **Python**, **SQL**, **Power BI**, **Cloud computing**, and **Machine Learning**. These skills are highly sought after in data analysis, cloud engineering, and software development roles.

### **Top companies hiring** included:

- Infosys
- Tata Consultancy Services (TCS)
- Accenture

### **Top job locations** were:

- Hyderabad
- Bengaluru
- Pune

## Common job roles identified:

- Data Analyst
- Software Developer
- Data Engineer

These results indicate that demand is high in the IT and analytics sectors, especially in major tech cities. The dashboard makes it easy to visualize this data in real time and explore trends interactively.

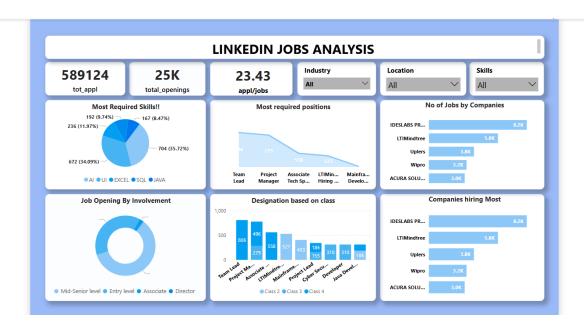
#### **6.6 Screenshots**

This section includes visual screenshots of the Power BI dashboard. It highlights:

- Top hiring companies
- In-demand skills
- City-wise job distribution
- Job roles vs. required experience levels

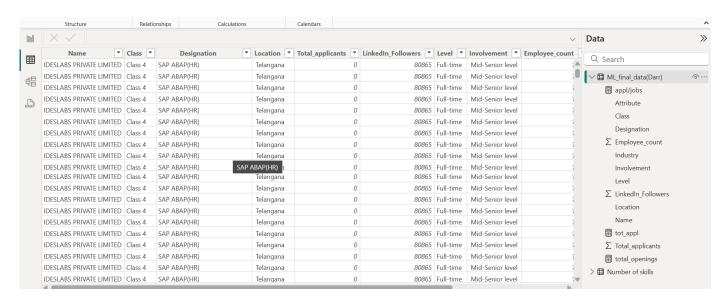


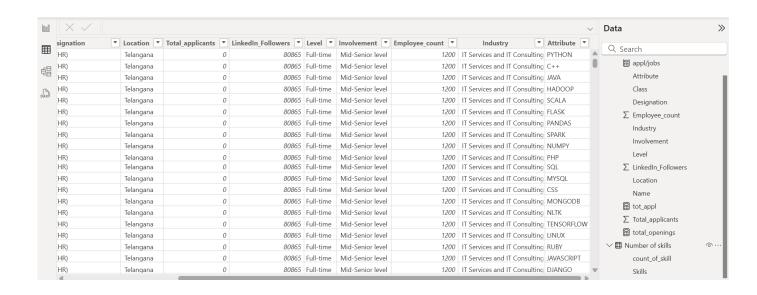
## **Final Project Working Screenshots**



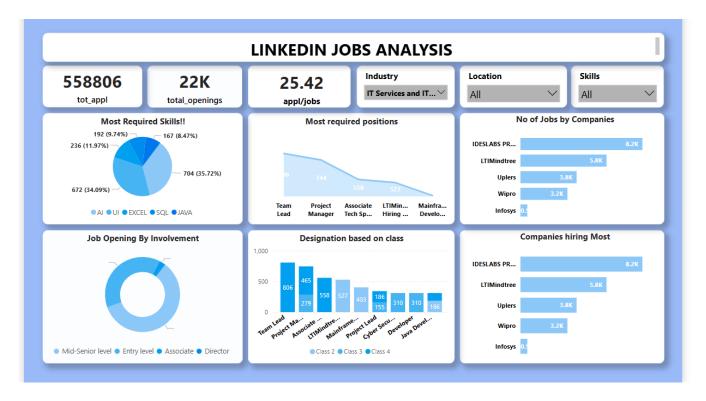


#### Dashboard











## GitHub Link

 $\frac{https://github.com/sure-trust/BODIGA.-SUMANJALI-g16-}{sql/blob/main/Final%20capstone%20project/Linkedin%20Job%20Analyis.pbix}$ 



## **Learning and Reflection**

## **Learning and Reflection**

This project has been a valuable learning journey, helping me grow both technically and analytically. By working with Power BI to build an Amazon Sales Dashboard, I gained hands-on experience in data visualization, dashboard creation, and business intelligence. I learned how to clean and structure raw sales data, build relationships between tables, write DAX formulas, and design visuals that present insights in a clear and impactful way.

One of the most important lessons was learning how to communicate stories through data. By using interactive elements like slicers, buttons, and filters, I discovered how to let users explore different views of the data, enabling them to make informed business decisions more efficiently.

I also came to understand the critical role of data accuracy and consistency. Every chart, card, and table needed to be precise to ensure users could trust the insights they were seeing. Whether analyzing sales by city or tracking returns, it was essential that the visuals were both accurate and user-friendly.

On a personal level, this project sharpened my problem-solving abilities, improved my attention to detail, and boosted my confidence in using Power BI. I now feel more equipped to apply these skills in real-world scenarios and contribute to data-driven strategies in business environments.

Overall, this project not only improved my technical capabilities but also deepened my understanding of how data can be transformed into actionable insights that support smarter business decisions.



## **Conclusion and Future Scope**

## **Objectives**

The primary goals of this project were to:

### 1. Clean and Prepare Raw Data

Transform raw Amazon sales and product data into a clean and structured format using Power Query Editor.

#### 2. Build Interactive Dashboards

Design dynamic, multi-page dashboards that visualize sales performance, product trends, and geographic distribution.

## 3. Perform Data Modeling

Create relationships between sales, products, and order status tables, and define calculated columns and DAX measures for key metrics.

### 4. Visualize Key Insights

Use visuals such as bar charts, line graphs, cards, and slicers to highlight sales patterns, best-selling products, and high-return regions.

## 5. Enable User Interactivity

Allow users to explore data interactively by filtering through date ranges, product categories, and delivery statuses.

## 6. Enhance Decision Making

Equip business stakeholders with insightful visuals that support quicker, data-driven decisions in areas like sales strategy and logistics.

## 7. Ensure Scalability

Develop the dashboard with flexibility to incorporate additional data sources or advanced analytics features like forecasting in the future.

## 8. Improve Analytical Skills

Strengthen proficiency in data visualization, dashboard building, and applying BI tools like Power BI and DAX for real-world analysis.



#### **Achievements**

## 1. Successfully Designed Dashboards

Developed a multi-page Power BI dashboard to visualize Amazon sales performance, product insights, and geographic trends using interactive visuals and slicers.

## 2. Advanced Data Modeling

Established clear relationships between sales, product, and order status tables; created calculated columns and DAX measures to generate meaningful KPIs such as total sales, units sold, and returns.

## 3. Data Transformation and Cleaning

Used Power Query Editor to clean raw datasets by removing duplicates, correcting data types, renaming columns, and preparing the data for seamless analysis.

## 4. Insightful Visualizations

Created impactful visual elements including bar charts, line graphs, cards, and slicers that highlight top-performing products, review patterns, and region-wise sales distribution.

## 5. User-Friendly Interface

Built an intuitive, easy-to-navigate dashboard layout that allows users to interact with data using category filters, date slicers, and status selection for focused analysis.

## 6. Demonstrated Analytical Thinking

Uncovered valuable insights such as best-selling cities, high-return products, and sales trends—demonstrating strong analytical reasoning and business understanding.

## 7. Scalability and Future-Readiness

Designed the dashboard to be scalable, allowing for the future integration of live data, trend forecasting, and additional analytical features.

## 8. Skill Development

Enhanced hands-on skills in Power BI, DAX, data modeling, and visual storytelling—boosting both technical expertise and real-world data analysis capability.



#### Conclusion

The **LinkedIn Job Analysis Dashboard** project represents a successful application of Business Intelligence tools in solving real-world problems. In a data-driven era where job seekers, students, and professionals are constantly navigating through evolving employment landscapes, this dashboard provides a structured and insightful view of hiring patterns, skill demands, and market trends. By transforming raw LinkedIn job data into interactive visualizations, the project bridges the gap between complex datasets and meaningful career insights.

Throughout the development of this project, various aspects of data processing, visualization, and analysis were explored. The use of Power BI allowed for seamless integration of cleaned datasets, application of DAX for dynamic metrics, and the creation of rich visuals like charts, slicers, and key performance indicators (KPIs). The dashboard offers real-time filtering capabilities that make it highly user-friendly and functional for diverse stakeholders including students, job seekers, and academic advisors.

The project not only helped reinforce technical skills in Excel, Power BI, and DAX, but also fostered critical thinking in terms of identifying patterns, extracting actionable information, and designing an intuitive user experience. It highlighted how visual analytics can transform decision-making, particularly in the context of career planning and skill development.

Overall, the project fulfills its objective of offering a simplified, interactive, and intelligent method to explore job market trends. It is a valuable tool that can aid individuals in aligning their skills with industry needs and planning their career growth strategically. With further enhancements like real-time API integration and predictive modeling, this dashboard holds the potential to evolve into a comprehensive, automated job market analysis platform.

## **Future Scope**

## 1. Real-Time Data Integration

Connect the dashboard to live data sources like SQL databases, web APIs, or cloud platforms to enable real-time monitoring of sales, returns, and delivery status, helping teams respond quickly to changes.

## 2. Predictive Analytics and Forecasting

Incorporate predictive models using Python or R to forecast future sales, identify high-demand periods, or detect products likely to be returned. These models can help improve planning and strategy.



### **Geospatial Sales Analysis**

Enhance the dashboard with map-based visuals (using Power BI Map or ArcGIS) to analyze regional sales distribution and identify high-performing and underperforming areas geographically.

#### 3. User Alerts and Threshold-Based Notifications

Set up automated alerts for specific events such as sudden sales drops, high return rates, or low inventory levels, enabling quicker decisions and better issue management.

#### 4. Role-Based Access and Custom Views

Implement role-based dashboard views for different users such as category managers, sales heads, and logistics teams. This makes the tool more secure and relevant to each department's needs.

### 5. Mobile-Friendly Dashboards

Optimize the dashboard design for mobile use, ensuring that users can access insights anytime and anywhere, enhancing usability and accessibility.

### 6. Expansion to Other Retail Data

Extend the dashboard to include additional datasets like customer feedback, marketing performance, or seasonal sales trends, making it a more comprehensive and scalable BI solution for retail analytics.