

Career Opportunities in Business Intelligence



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What is the purpose of BI?

BI provides quick and simple methods to visualize company metrics, generate reports, and analyze data. These methods, in turn, help top management to:

- Analyze existing trends.
- Lay out company development plans.
- Ensure such plans are executed as scheduled.
- Detect anomalies and problems.
- Apply corrective actions.



Name some benefits of data normalization.

- Removes data duplication.
- Allows finer transaction granularity. Each referenced table data could be changed independently in its own transaction without affecting its foreign key relationships.
- Enables clearer referential integrity. The smaller entities produced by normalization allow modeling business objects and their relations as close to the real world as possible.
- Allows incremental schema changes. Adding or deleting columns in one table does not affect the structure of referenced tables.

Define OLTP and OLAP. What is the difference?

What are their purposes?

- OLTP stands for “online transactional processing.” It is used for company business applications. They are most often customer- (i.e., people- or business-) facing.
- OLAP stands for “online analytical processing.” It is used for a company’s internal analysis by department leads and company top management to steer the company.

What is a data mart? When is it appropriate to use data marts instead of a single data warehouse?

DATA WAREHOUSE	DATA MART
A central location which stores consolidated data from multiple databases	A repository of data that is designed to serve a particular community of knowledge workers
Objective is to support business intelligence, batch reporting, and data visualization	Objective is to store and use data by a specific user community
Captures data from multiple data sources	Captures data from a data warehouse or operational systems or external sources
Allows collecting data from multiple sources and analyzing them to take business decisions	Allows storing data relevant to specific business groups with the organization to access data easily and faster

What are the primary responsibilities of a BI developer?

- Analyze company business processes and data.
- Standardize company data terminology.
- Gather reporting requirements.
- Match the above requirements against existing data.
- Build BI reports.
- Analyze the fleet of existing reports for further standardization purposes.
- This question can be useful as an opening one—not just to help filter undesirable candidates and put more qualified candidates at ease but also to provide an opportunity to discuss any nonstandard responsibilities that may be involved in the particular job at hand.



What is the universe in Business Analytics?

- The universe is a kind of semantic layer between the database and user interface. More correctly, it is one of the interfacing layers between the client (business user) and a data warehouse. It actually defines an entire relationship between various tables in a data warehouse.



What is a dashboard in a data warehouse

The dashboard is nothing but the arrangement of all the reports and graphs on one page. It is nothing but the collection of reports in a different format that has the same functionality displayed on the same page.



What is SAS Business Intelligence?

SAS Business Intelligence (BI) is a suite of applications that allows you to prepare and display data for statistics, predictive analytics, data mining, text mining, and forecasting. The tools provide interactive visualizations backed by analytics.



What can you tell me about yourself and the BI projects you have worked on?

- Use this and other questions regarding your background to discuss BI-related projects you've been involved in. Discuss current or recent BI roles you've had or would like to have as well as what you've learned or would like to learn. Mention degrees, internships, bootcamps and certification programs that are relevant to the job.

Make sure to emphasize any courses that offered relevant skills and experience, such as:

- Data collection, analysis, visualization, architecture
- Business strategy
- Risk mitigation
- Accounting software

When giving an overview of your background, avoid getting bogged down with extraneous details. You might focus on the present and future -- and briefly touch on the distant past.

How do you feel about Agile software development for BI projects?

- Agile software development is much more collaborative in comparison to other software development models. I believe Agile can be the best solution in many projects. However, maybe that's not always the case. That said, I'd love to get familiar with the methodologies employed here. At the end of the day, it's the end results that matter most, and not the methodologies behind the projects.



How do you define "benchmarking," and why is it important?

- Benchmarking refers to the evaluation and comparison of an organization's business processes to those of its competitors. These insights will help the organization establish standards and improvements its business performance. BI analysts would study processes and metrics such as product development and manufacturing procedures.



Explain in one line the meaning of granularity.

- Granularity tells us about the level (high to low) of information residing in the table. The lower the granularity is, the low-level information it contains.



What are the key elements of the business intelligence system?

The key elements of every business intelligence system are:

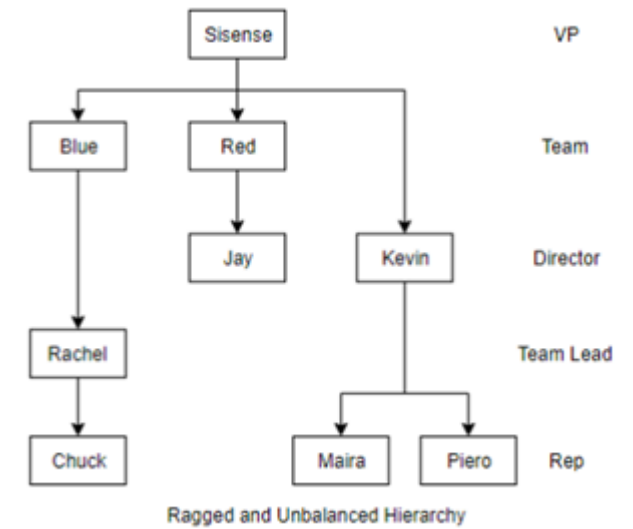
1. Data modeling
2. Data warehouse
3. Appliance systems
4. Source systems
5. Enterprise Information Management (EIM)
6. Technologies and Tools
7. ETL process



What are the major types of business reports?

1. Metric Management Reports – These reports include outcome-oriented metrics based on the key performance indicators.
2. Dashboard-type Reports – These reports provide static as well as a customizable view of different performance indicators on a single page.
3. Balanced Scoreboard-type Reports – These reports include an integrated view for determining the company's health from different perspectives, including financial, growth, customer, and business view.

What is a RAGGED hierarchy?



- Under normal circumstances, each level in a hierarchy in Microsoft SQL Server Analysis Services (SSAS) has the same number of members above it as any other member at the same level. In a ragged hierarchy, the logical parent member of at least one member is not in the level immediately above the member. When this occurs, the hierarchy descends to different levels for different drilldown paths. Expanding through every level for every drilldown path is then unnecessarily complicated.

What is self-service business intelligence?



- SSBI is an approach to data analytics that enables business users to filter, segment, and, analyze their data, without the in-depth technical knowledge in statistical analysis, business intelligence (BI).
- SSBI has made it easier for end-users to access their data and create various visuals to get better business insights.
- Anybody who has a basic understanding of the data can create reports to build intuitive and shareable dashboards.

What are Building Blocks in Power BI?

- **Visualizations:** Visualization is a visual representation of data.

Example: Pie Chart, Line Graph, Side by Side Bar Charts, Graphical Presentation of the source data on top of Geographical Map, Tree Map, etc.

- **Datasets:** Dataset is a collection of data that Power BI uses to create its visualizations.
- **Reports:** Report is a collection of visualizations that appear together on one or more pages.
- **Dashboards:** Dashboard is single layer presentation of multiple visualizations, i.e we can integrate one or more visualizations into one page layer.
- **Tiles:** Tile is a single visualization in a report or on a dashboard.

Example: Pie Chart in Dashboard or Report.

What is INVEST?

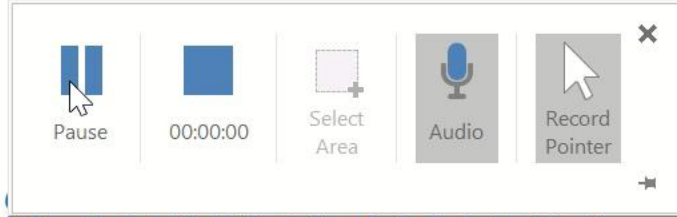
- INVEST is an abbreviation of Independent, Negotiable, Valuable, Estimable, Sized appropriately, and Testable. This term is used by business analysts and project managers to deliver quality services and products.



What is BRD? How is it different from SRS?

- BRD is an abbreviation for Business Requirement Document. It is a formal contract between the organization and the client for the development of the specific product.
- BRD is a functional specification of the software whereas SRS is both BA creates it after their direct interaction with the clients
- BRD is created by a business analyst after their direct interaction with the clients, whereas SRS is designed based on technical expertise and needs.
- SRS is derived from BRD

What is business modelling.



- Business modelling is a step- by -step approach for identifying the value proposition for operating the business.
- The key attributes of business modelling to develop a strategic plan for an organization are:

- Vision
- Mission
- Objectives
- Strategies
- Action plan



What are personas, and how they are useful in user-centred design methodology?

- Personas are created in place of real users to understand their behavioral patterns in different scenarios. In user-centered design methodology, a system is developed, keeping the viewpoint of end-users in mind. Personas help create such systems.



General questions

- Why are you interested in this job?
- What do you know about our company?
- What do you enjoy about being a business intelligence analyst?
- Why do you think a business intelligence analyst is important?
- What do you consider your strengths and why?
- What do you consider your weaknesses and why?
- How well do you work in a team?
- What do you enjoy the most about your workday?
- What are some projects you completed?
- How would you define the role of a business intelligence analyst?
- Where do you see yourself five years from now?

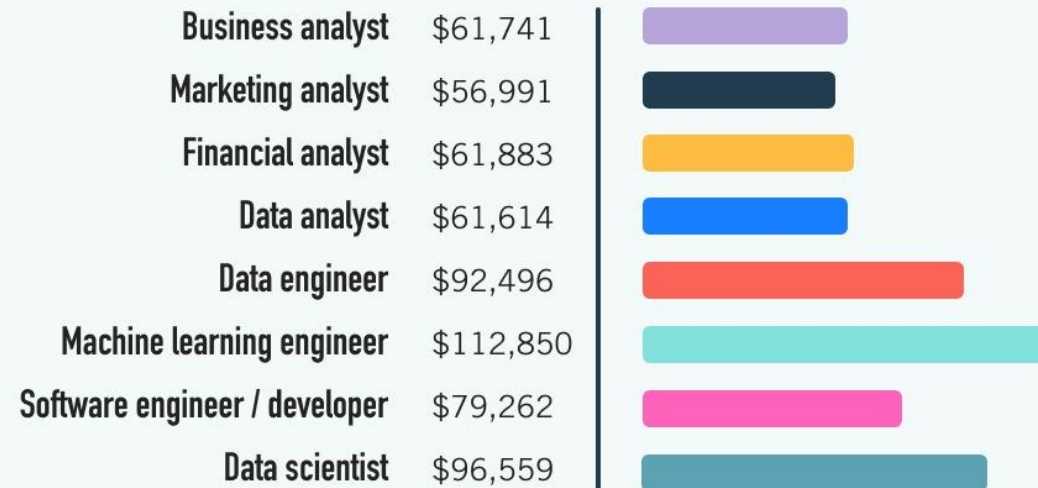


Questions about your business intelligence experience and background

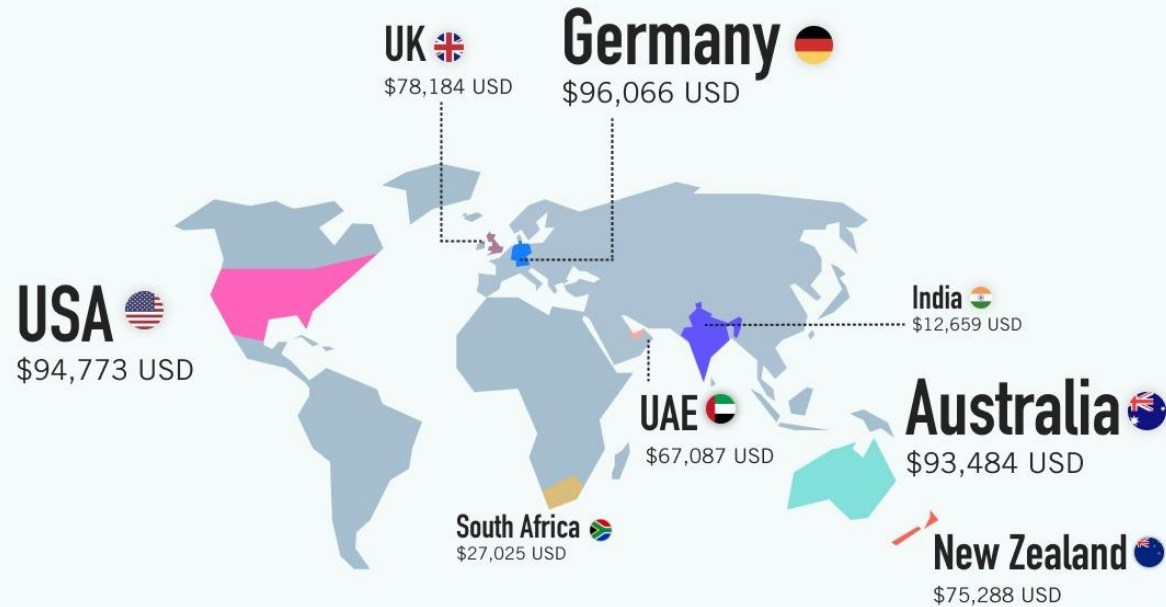
- What data collection software do you use?
- What is your procedure for collecting data?
- What is your experience with qualitative and quantitative research?
- What three traits do you think are necessary to have as a business intelligence analyst?
- What advice would you give to a new business intelligence analyst?
- How much experience do you have presenting data?
- How is your approach to business intelligence different than other analysts?
- How do you explain business intelligence concepts to people outside your field?
- What do you find the most challenging aspect of being a business intelligence analyst?
- Can you define risk management and describe its process?
- What do you consider to be the most valuable business course you took?



Business Analyst Salary vs Other Data Roles



Business Analyst Salaries Around the World



Typical Business Analyst Salaries

Position	Salary
Entry Level Business Systems Analyst	\$56,043
Intermediate Level Business Systems Analyst	\$71,865
Senior Business Systems Analyst	\$86,635
Expert Business Systems Analyst	\$100,312
Business Systems Analyst- Consultant	\$113,202
Entry Level Business Data Analyst	\$54,272
Intermediate Level Business Data Analyst	\$70,123
Senior Business Data Analyst	\$87,713
Business Process Consultant	\$106,234
Business Development Director	\$170,307