Job market analysis with Power BI

CASE STUDY: ANALYZING JOB MARKET DATA IN POWER BI

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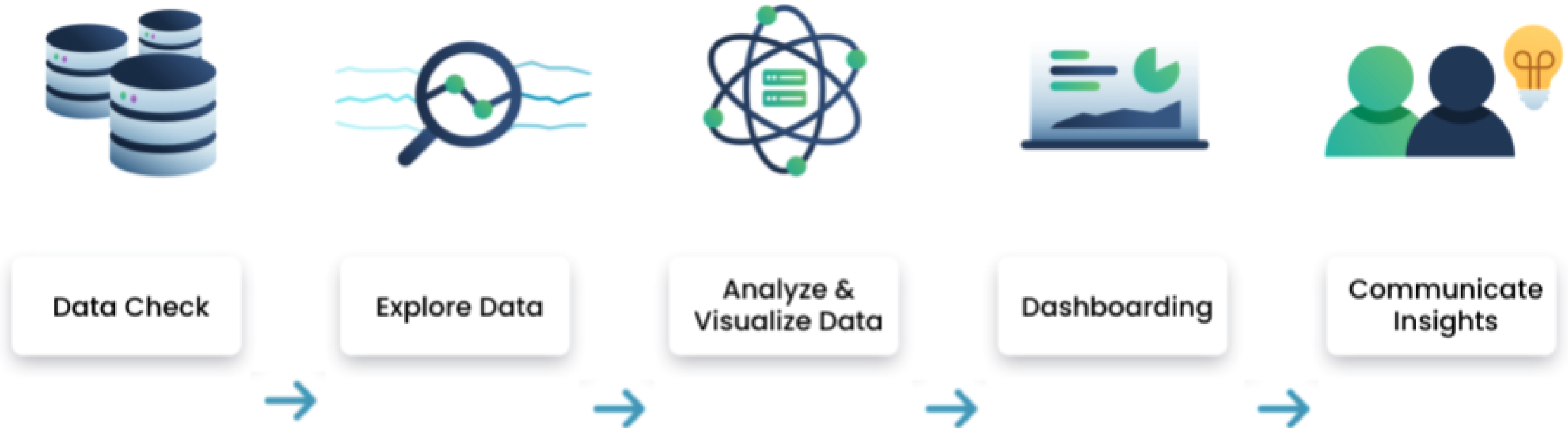
What is a case study?

- Apply Power BI skills

- Combine previously learned concepts

- Solve an example real-world problem

Prerequisite courses:

- Introduction to Power BI

- Data Visualization in Power BI

- Introduction to Calculations with DAX in Power BI

Case study

Data analytics pipeline with Power BI

Data Check → Explore Data → Analyze & Visualize Data → Dashboarding → Communicate Insights

Data analytics pipeline - checking and exploring data

| Data Check | Explore Data | Analyze & Visualize Data | Dashboarding | Communicate Insights |

- Perform an integrity check of the dataset

- Exploratory data analysis (EDA)

- Apply business questions to start investigating the problem

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Data analytics pipeline - analyze & visualize

Data Check	Explore Data	Analyze & Visualize Data	Dashboarding	Communicate Insights

- Build overview tables and visualizations

- Perform more in-depth analytics

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Data analytics pipeline - dashboarding

Data Check → Explore Data → Analyze & Visualize Data → **Dashboarding** → Communicate Insights

- Combine visualizations into a few dashboards

- Design with the problem and audience in mind

Problem to solve
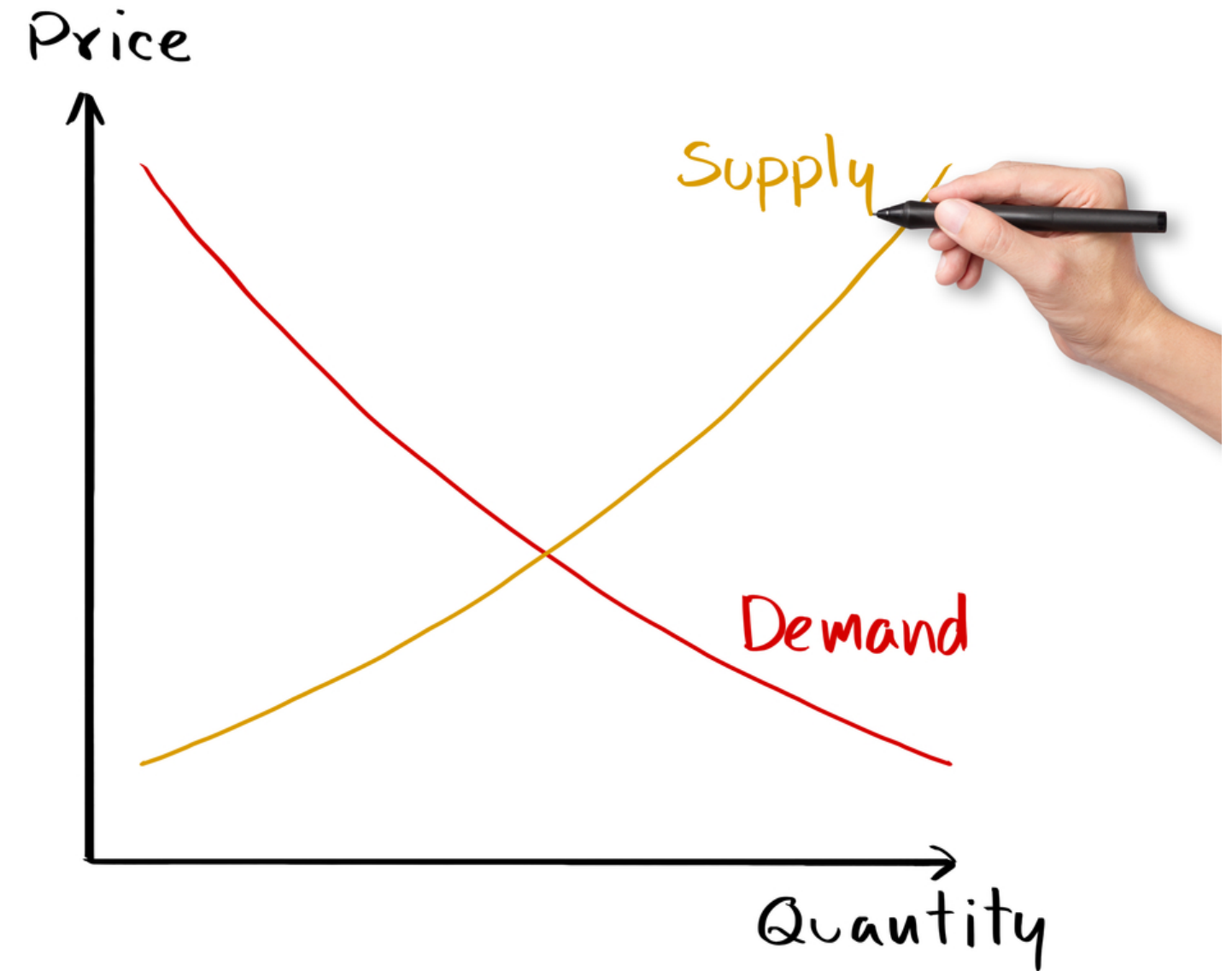
Investigate market trends for data science roles

- **The context:** An employee recruiting firm, *DataSearch*, needs to uncover job trends

- **The task:** Discover trends in jobs and skills within the data science industry

- **The dataset:** A fictitious collection of key details from job postings

Market trends to watch

The job market is a classic supply and demand problem.

- **Quantity:** The number of job postings

- **Price:** Corresponds to salary

- **Supply:** Those looking for employment

- **Demand:** The amount of employment opportunities

The data

Key characteristics

- Key details from job postings from 2017 to 2021 for jobs in the data science industry

- Each row correlates to a specific job posting in time
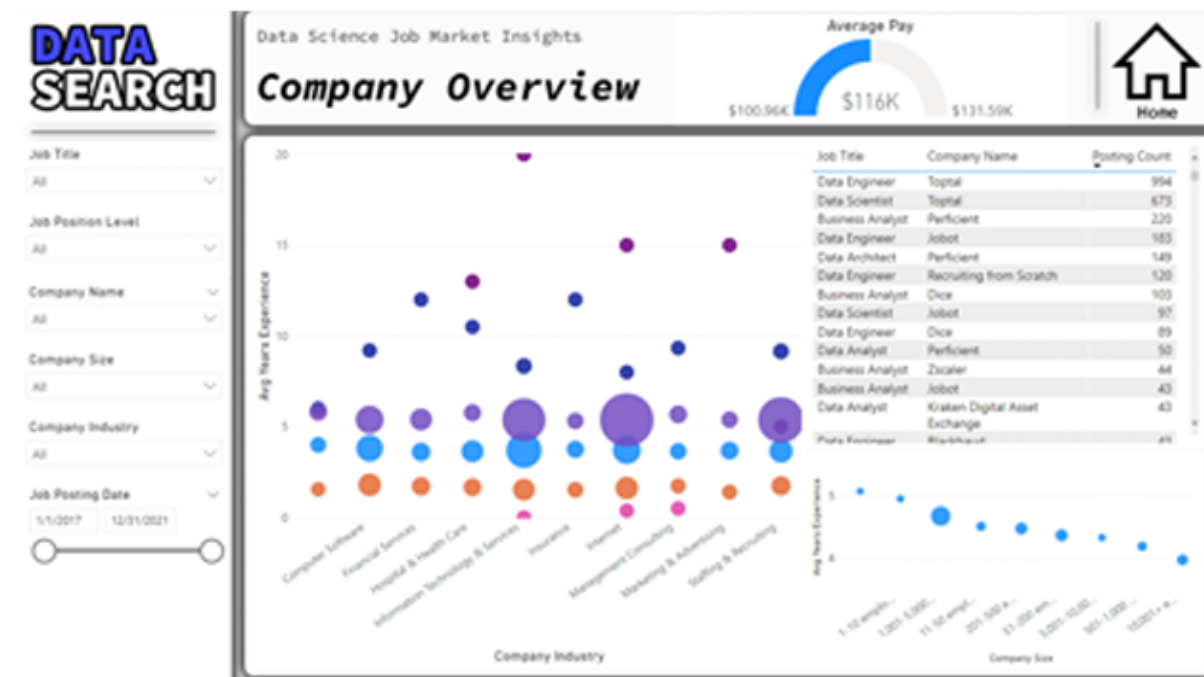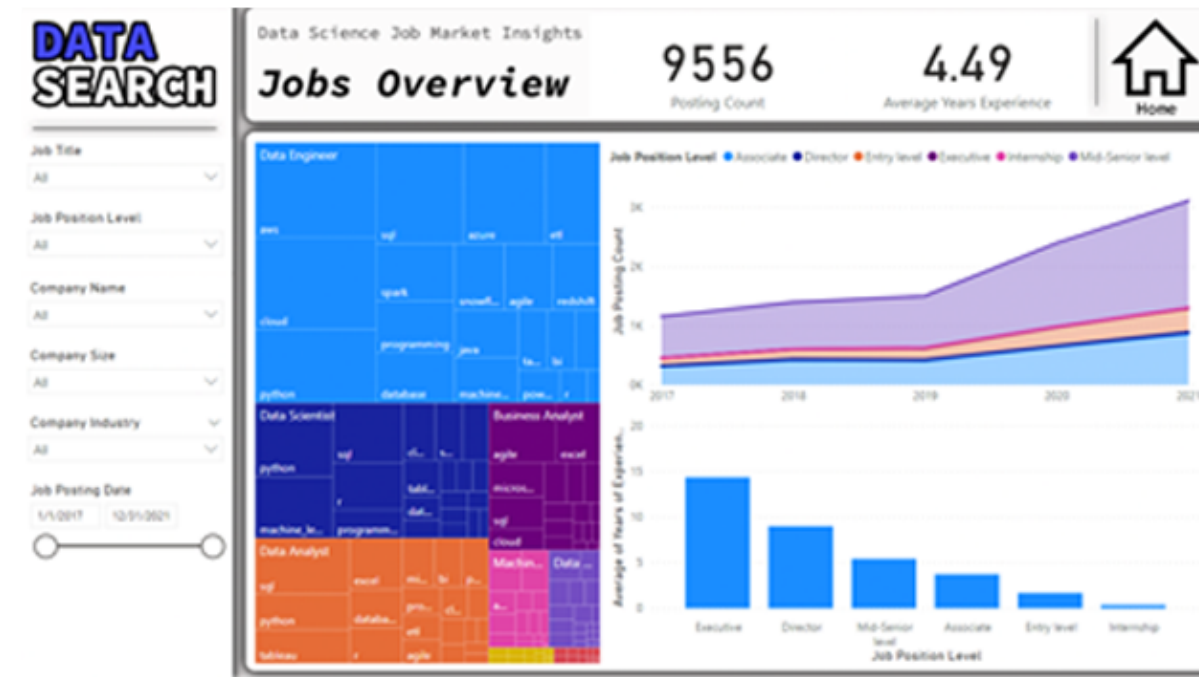
- One table containing 19 columns

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The data

Qualitative Columns

Column name	Description
Job Posting Id	The unique ID that identifies a job
Job Title	Data Analyst, Data Scientist, ...
Job Position Type	Full-time, Contract
Job Position Level	Internship, Entry-level, Executive, ...
Job Skills	['powerbi, excel, sql'], ['python', 'databases'], ...
...	...

The data

Quantitative Columns

Column name	Description
Job Posting Date	The date of the job posting
Years of Experience	Number of years minimum experience
Minimum Pay	Minimum expected salary
Maximum Pay	Maximum expected salary
Number of Applicants	Number of applicants in first 24 hours of job posting
...	...

Final deliverable

Let's practice!

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