(BIG) DATA ANALYTICS

By

Saiyed Shahab Ahmed

DATA ANALYTICS

Data analytics job title

Portfolio Analyst
Campaign Analyst
HR/People Analyst
Pricing Analyst
Financial Analyst
Security Analyst
Online Marketing Analyst
Modeler
Marketing Operations Analyst
A/B Testing Analyst
Statistician
Product Analyst
Excel Analyst
Marketing Analyst
Web Analyst
Data Scientist
Fraud/Risk Analyst
CRM Analyst
SQL Analyst
Statistical Analyst
Database Marketing Analyst
Data Analysts
SAS Programmer
Database Analyst

DATA ANALYST

Skill is required for Data analytics ?

1.) Analytical Skills

2.) Numeracy Skills

3.) Technical and Computer Skills

4.) Attention to Details

5.) Business Skills

6.) Communication Skills

Business Analytics

02

- Introduction to business analytics
- Goals and Applications
- Scope
- Evolution & Applications
- Business Analytics & Human Resource
- Case Study
- Business Analytics Tools
- Examples

What is Business Analytics

A process of collating, sorting, processing, and studying business data, and using statistical models and iterative methodologies to transform data into business insights

Goal ?

It help determine which datasets are useful and how they can be leveraged to solve problems and increase efficiency, productivity, and revenue.
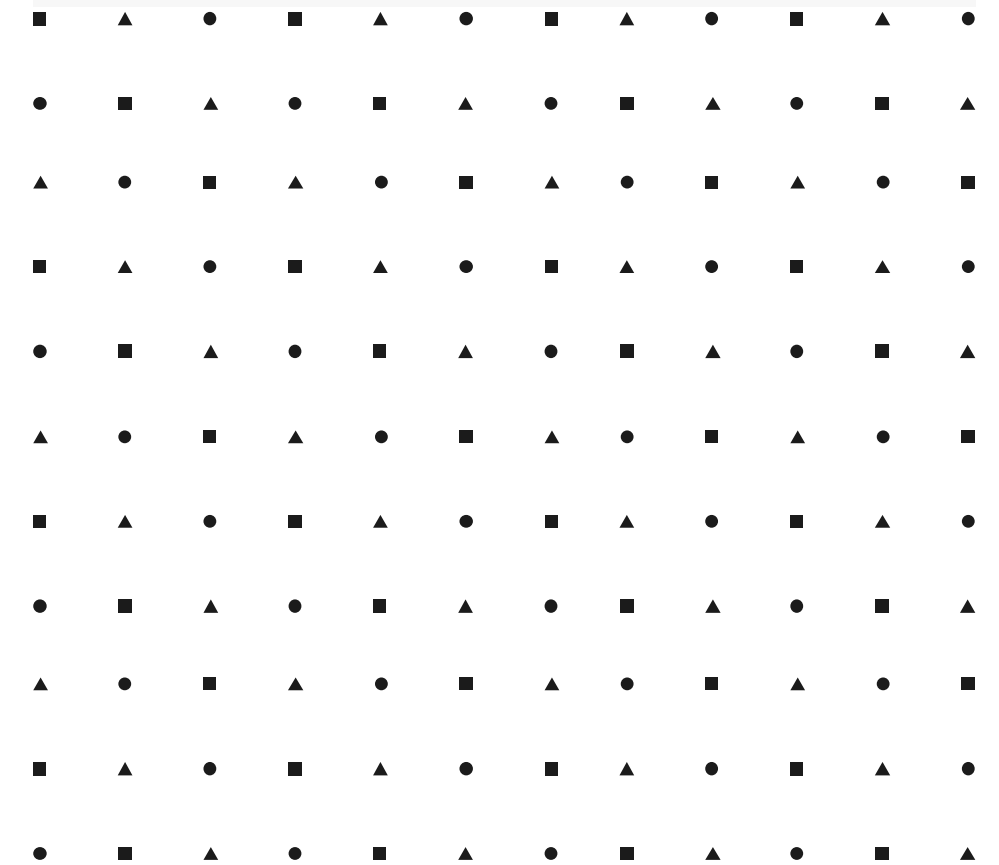
APPLICATIONS

- Management of customer relationships
  - Predict customer trends and behaviors
- Financial and marketing activities
  - Increase business productivity
- Supply chain management
- Human resource planning
- Pricing decisions
- Analyze, interpret and deliver data in meaningful ways
- Drive effective decision-making
- Sport team game strategies
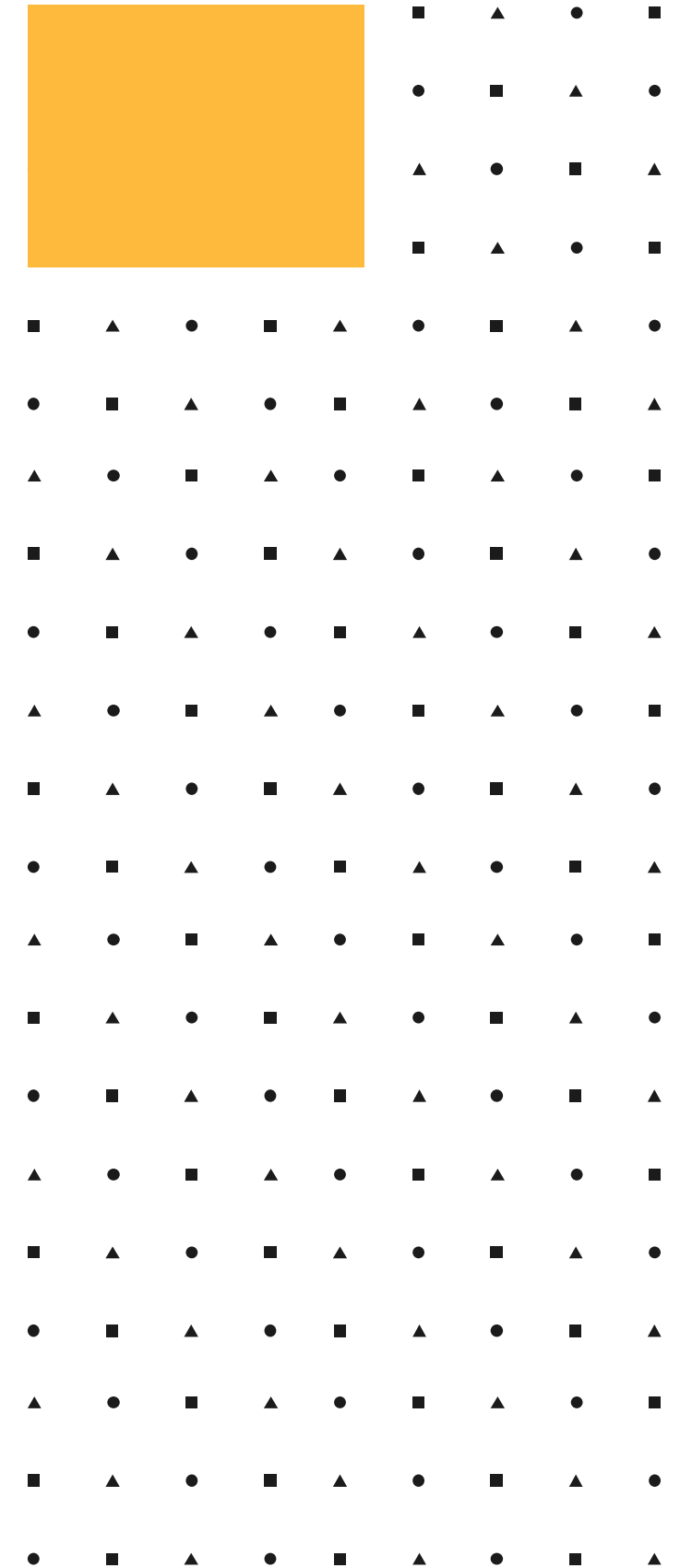
IMPORTANCE OF BUSINESS ANALYTICS
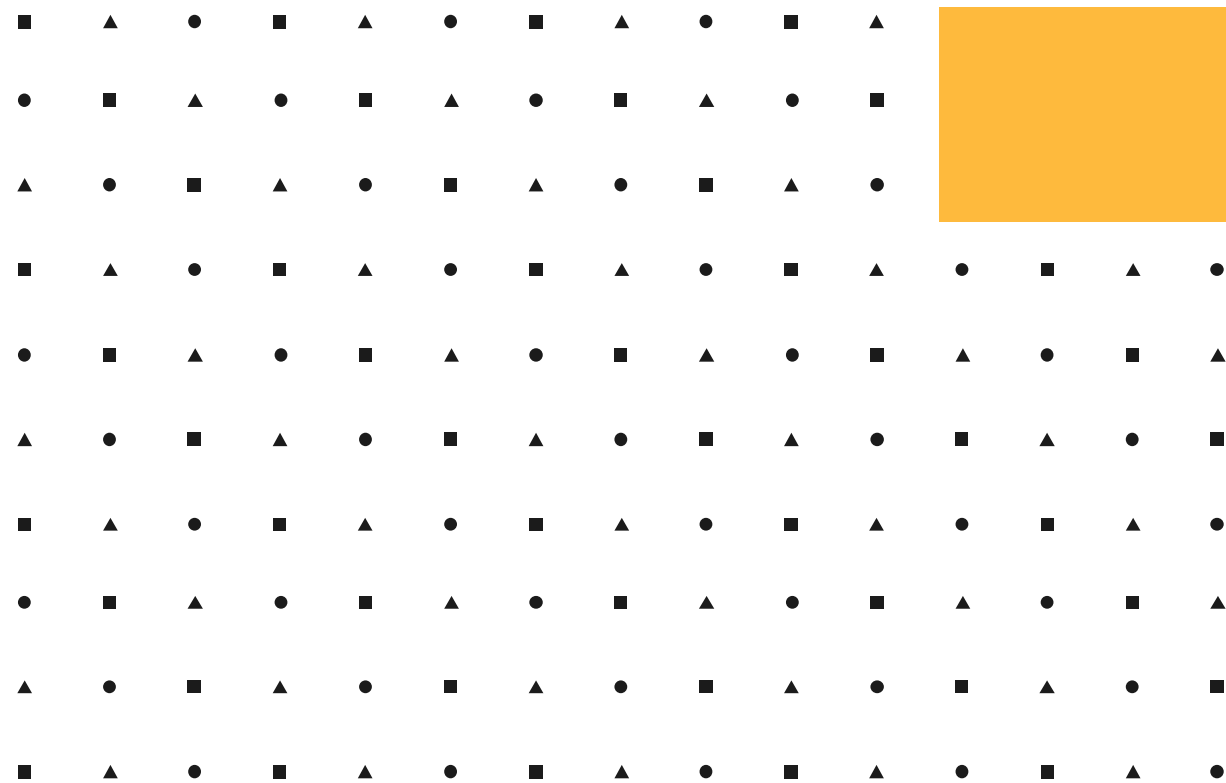
There is a strong relationship of BA with:

- Financial domain
- HR strategies
- Production/Marketing
- Supply Chain / Procurement/MM
- Marketing/Advertisement

BA enhances understanding of data

BA is vital for businesses to remain competitive

BA enables creation of informative reports

Scope Of Business Analytics

Descriptive
What has happened?

Diagnostic
Why did it happen?

Predictive
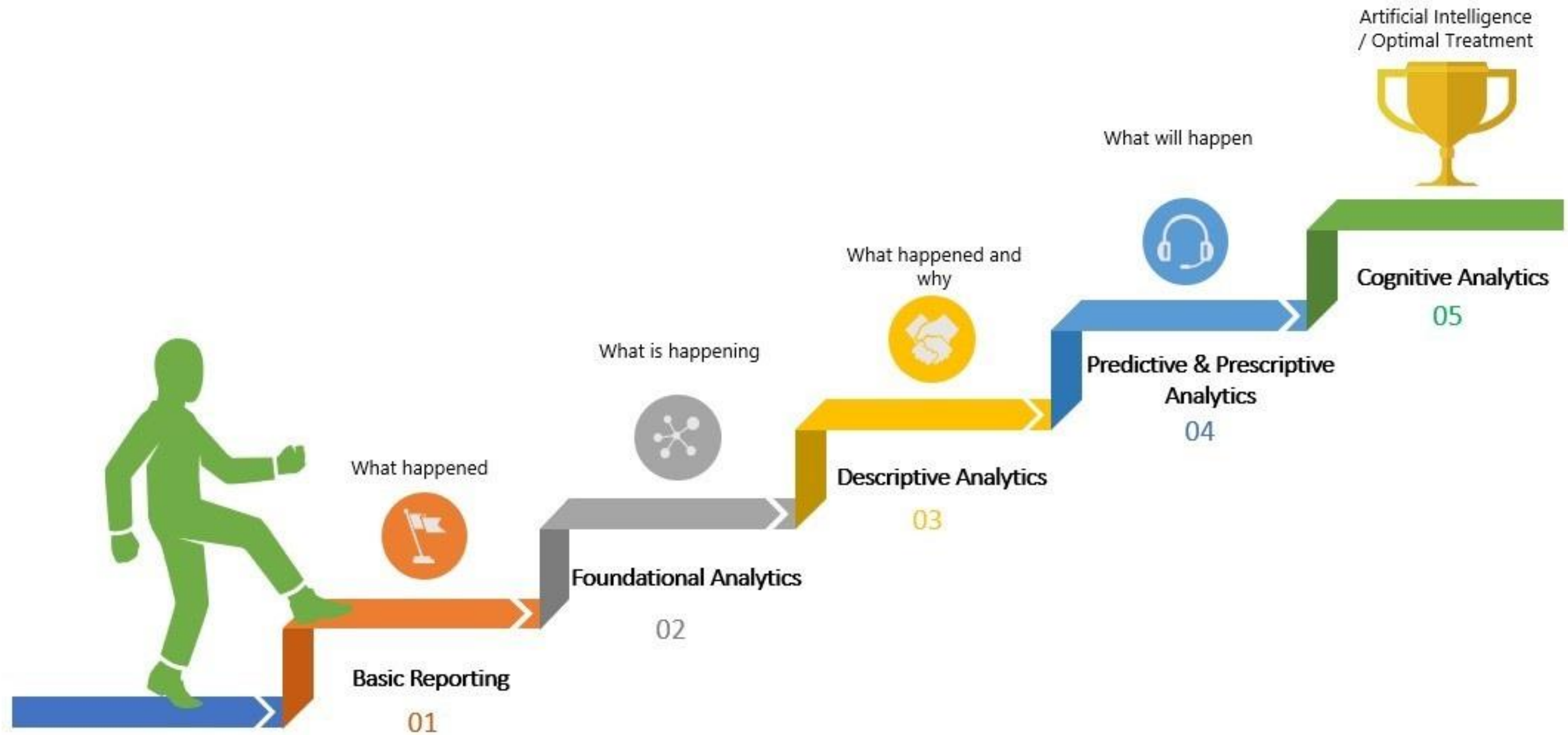What will happen next?

Prescriptive
What should I do?

Looking back | Looking forward

Journey of Data towards Analytics

How business analytics applies to organization

1- Aggregating data: Most of the corporate reporting consists of ad-hoc reporting. Different extracts are manually combined. BI tools help in the aggregation of data and enable automated reporting.

How business analytics applies to Organizations

2 - Visualizing data: Most systems are transactional systems that generate transactional data. See the example below: the candidate is hired on a certain date and the employee's contract is terminated on a certain date. Both actions are recorded as separate entries (transactions) in the system.

Date	Employee_ID	Action
01/01/2017 09:56:12 AM	57	Employee profile created
01/06/2017 17:32:51 AM	57	Employee status: Terminated

These systems are build to keep records, not to report or visualize data. BA tools are really good at aggregating data from multiple systems and visualizing it.

How business analytics applies to Organizations

3 - **Analyze data:** The final step is data analytics.
BA tools are much better at analyzing data than
your average reporting system.

In short, BA tools are made to aggregate, visualize, analyze, and report data..

BUSINESS ANALYTICS - HR CASE STUDY

Saving money by predicting who will quit

On March 13 2015, the Wall Street Journal published an article titled: " The Algorithm That Tells the Boss Who Might Quit". The article explored how Credit Suisse was able to predict who might quit the company. It was one of the first examples of the now very popular employee churn analytics.

Not only were the analysts at Credit Suisse able to predict who might quit, but they also could identify why these people might quit. This information was provided anonymously to managers so they could reduce turnover risk factors (here's how to calculate employee turnover) and retain their people better.

In addition, special managers were trained to retain the high performing employees who had a high flight risk. In total, this program saved Credit Suisse approximately $ 70,000,000 a year.

https://www.wsj.com/articles/the-algorithm-that-tells-the-boss-who-might-quit-1426287935

BUSINESS ANALYTICS - HR CASE STUDY

Flight risk at IBM

A analysis was done at IBM, where turnover was high for certain business-critical roles. Using IBM's Watson machine learning capabilities, the workforce analytics team build an algorithm that included sources like recruitment data, tenure, promotion history, performance, role, salary, location, job role, and more.

The company also included employee sentiment, measured through their Social Pulse. The hypothesis here was that engagement with social media might fall when employees are thinking about leaving.

The investment yielded $ 300,000,000 over four years and turnover for critical roles has fallen by 25%. According to the report, productivity has also improved while recruitment cost have fallen.
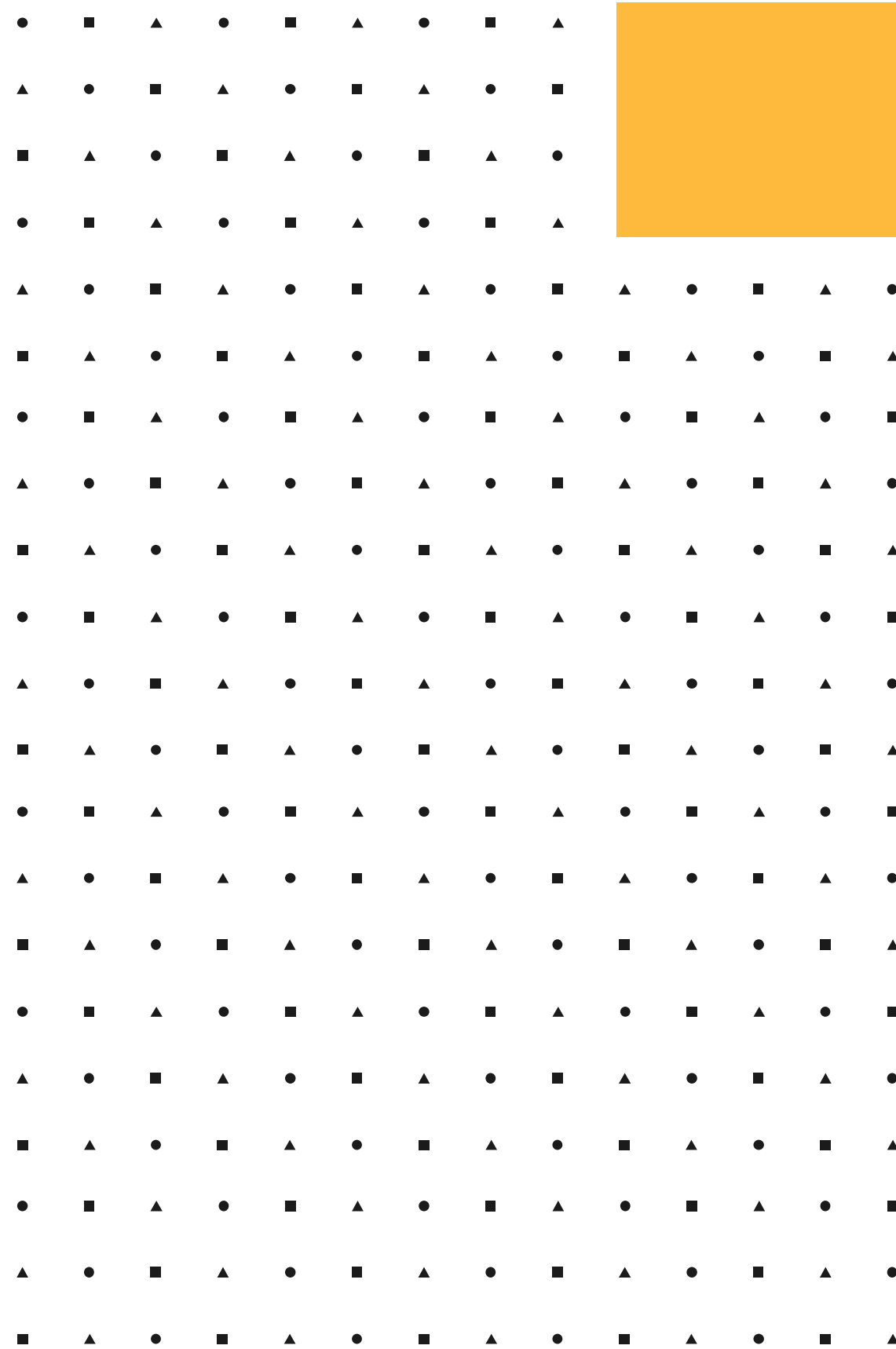
Some Business Analytics Tools

BA tools include many methodologies and open source solutions that can be leveraged to help analysts perform tasks and generate reports that are easy for laypersons to understand.

Power BI is a business analytics service by Microsoft. It aims to provide interactive visualizations and business intelligence capabilities with an interface simple enough for end users to create their own reports and dashboards

Qlick Sense is a business intelligence (BI) and visual analytics platform that supports a range of analytic use cases.

Metabase is an open source BI tool that lets users ask questions about input data and displays answers in detailed tables or bar graphs for easy reporting.

Business Analytics Or (BIG) Data Analytics