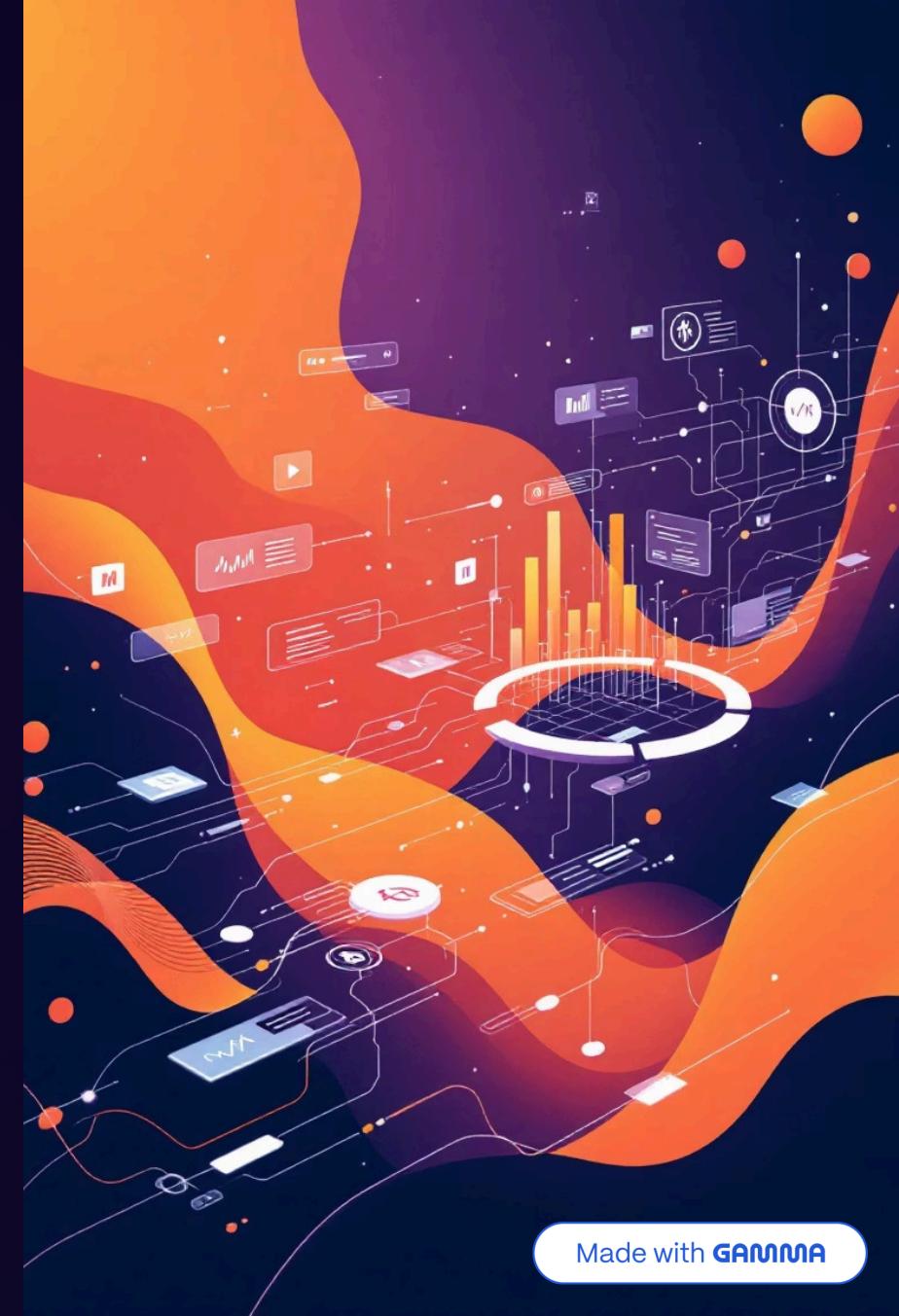


The Analytical Foundation: Your Path to AI-Driven Business Intelligence

Master the essential skills, tools, and methodologies that transform raw data into strategic business insights





Understanding Analysis and Business Intelligence

What is Analysis?

Analysis is the systematic process of inspecting, cleansing, transforming, and modelling data to discover useful information, inform conclusions, and support decision-making.

Think of it as being a **data detective**—you search for clues hidden within data to solve complex business mysteries.

Why Do We Analyse?

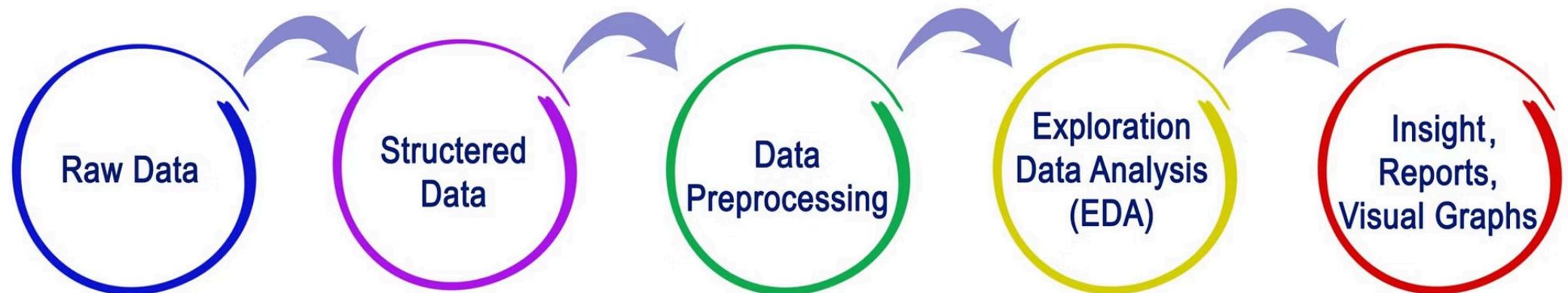
The primary goal is moving from **reactive** to **proactive** and **predictive** decision-making:

- Understand the past: What happened?
- Explain the present: Why did it happen?
- Predict the future: What will happen next?
- Influence action: What should we do?

The Analytical Workflow: A Systematic Approach

Following the industry-standard CRISP-DM methodology ensures comprehensive, repeatable analysis that delivers actionable insights.

Exploration Data Analysis



01

Business Understanding

Define the specific business problem you're solving. Example:
How can we reduce customer churn by 15%?

02

Data Understanding

Identify data sources and assess quality. Gather customer transactions, surveys, and behavioural data.

03

Data Preparation

Clean errors, handle missing values, and standardise formats.
Often the most time-consuming step.

04

Modelling & Analysis

Apply statistical techniques, data mining, or machine learning models to extract patterns and insights.

05

Evaluation

Validate results against business objectives. Do findings answer the original question effectively?

06

Deployment & Communication

Present findings through compelling dashboards, reports, and visualisations that drive action.

Understanding Your Role as a Data Analyst



Core Responsibilities

Data Analysts focus on **descriptive and diagnostic analytics**—understanding what happened and why it happened.

Essential tasks include:

- Querying databases using SQL
- Cleaning and organising complex datasets
- Creating standardised reports
- Building clear, actionable visualisations

Data Analyst vs Business Analyst

Feature	Data Analyst	Business Analyst
Primary Focus	Data—querying, cleaning, modelling	Business—strategy, processes, requirements
Key Question	What does the data say?	What does the business need?
Core Skills	SQL, Python/R, Statistics	Requirements gathering, process mapping
Output	Reports, dashboards, insights	Business requirements documents, use cases

- The AI Business Intelligence Analyst** role combines the technical expertise of a Data Analyst with the strategic thinking of a Business Analyst, specifically leveraging advanced AI/ML tools to generate deeper insights.



Essential Tools of the Trade



SQL

The universal language for database communication. Master this **fundamental skill** to query, manipulate, and retrieve data efficiently from any database system.



Python & R

Programming languages for complex data manipulation, statistical testing, and building predictive models. Essential for the **AI component** of your analysis work.



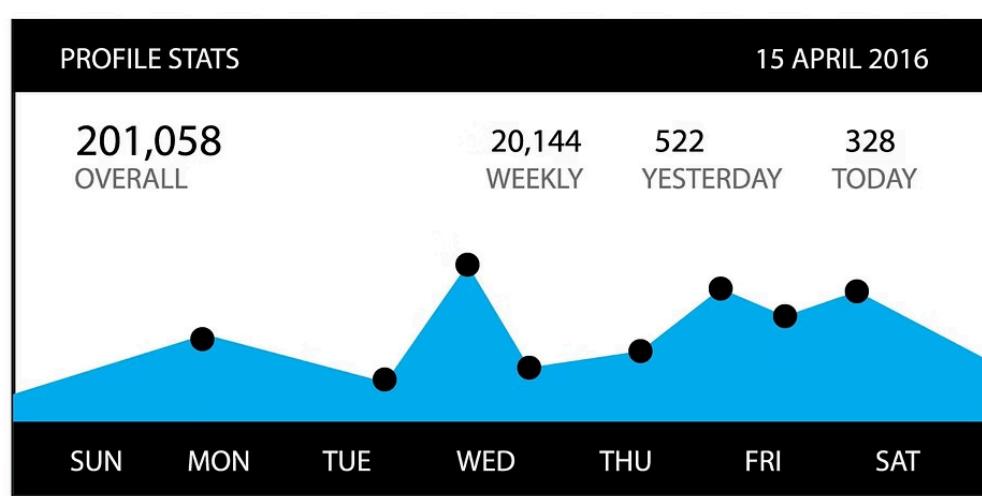
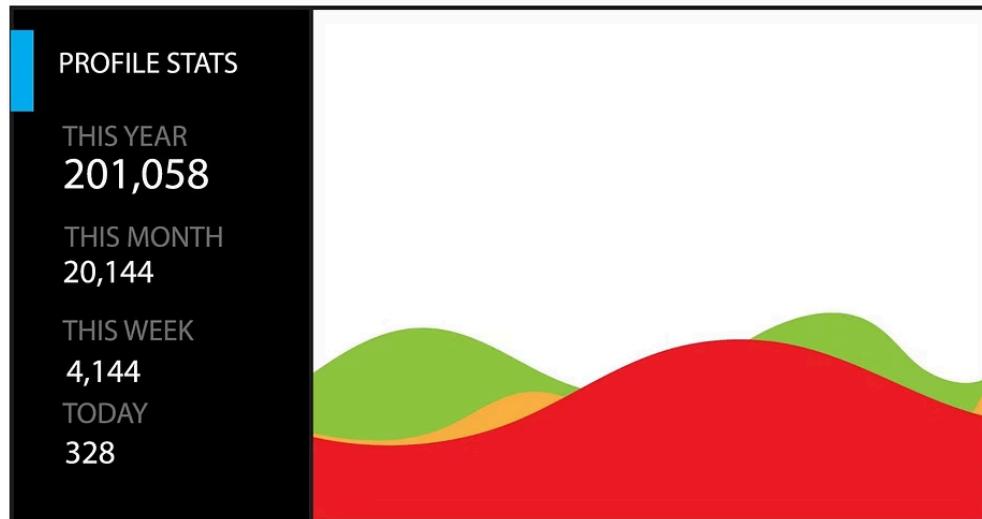
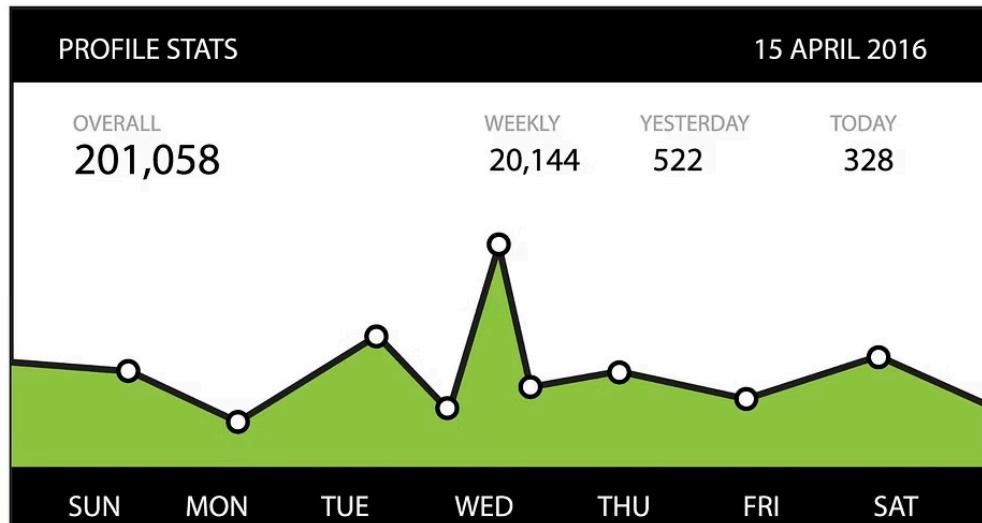
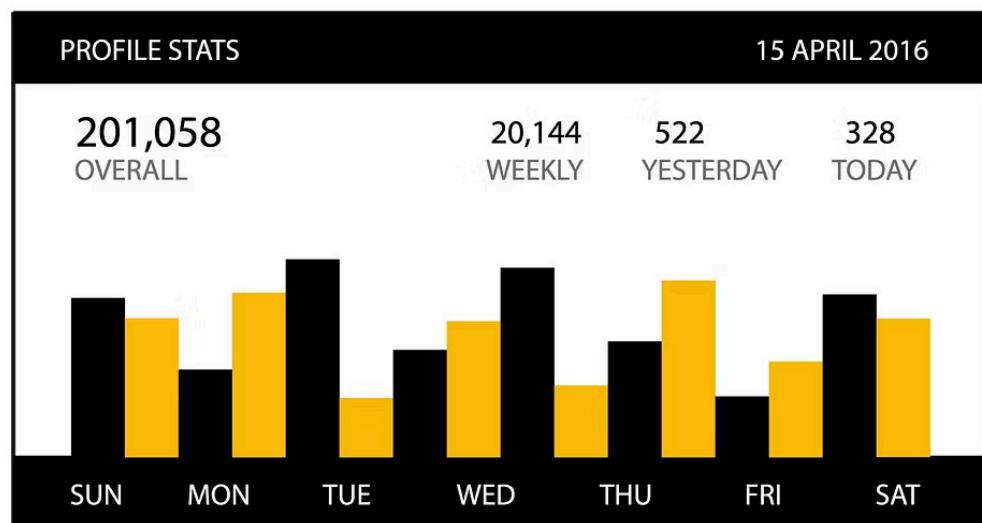
Power BI

Interactive dashboards deeply integrated with Microsoft ecosystem. Features DAX (Data Analysis Expressions) for sophisticated calculations and business logic.



Tableau

Industry-leading tool for **data exploration** and creating beautiful, intuitive visualisations. Known for exceptional ease of use and rapid insight generation.



Additional tools worth exploring include **Looker** for enterprise-scale BI and **Excel** for foundational data analysis and quick prototyping.



Your Journey Forward



Analysis Bridges Data and Decisions

Transform raw data into smart, strategic business decisions through systematic analysis



Follow Structured Processes

The analytical workflow is repeatable, ensuring consistent quality and comprehensive insights



Master Essential Tools

SQL, Power BI, Tableau, and Python are non-negotiable foundations for your career



Progress Toward Prescriptive Analytics

The ultimate goal: telling businesses exactly what actions to take, powered by AI-driven insights

Your future as an AI Business Intelligence Analyst starts with mastering these fundamentals. Each tool, concept, and methodology you learn today becomes a building block for tomorrow's advanced AI-powered insights.