



FREE RESOURCE

Data Analysis Starter Kit

Key concepts, tools, and a learning roadmap to start your data journey

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GETTING ORIENTED

What Is Data Analysis, Really?

Three words get used almost interchangeably, but they describe very different things — and understanding the difference is the first real step toward thinking like an analyst.

Data

Raw facts with no context. A number, a word, a date — on its own, meaningless. Example: "38".

Information

Data with context added. Now it means something. Example: "38-year-old customer".

Analytics

Looking across many pieces of information to find a pattern worth acting on. Example: "Customers aged 35-40 buy 2x more on weekends".

The Data-to-Decision Pipeline

Every data analysis project — big or small — follows the same basic shape:

Collect**Clean****Analyze****Visualize****Decide**

Most beginners assume "Analyze" is where all the real work happens. In practice, "Clean" usually takes the most time — messy, inconsistent data is the norm, not the exception.

What Does a Data Analyst Actually Do?

- ✓ Cleans messy, real-world data into something usable
- ✓ Writes queries and formulas to answer specific business questions
- ✓ Builds dashboards and visuals that summarize findings clearly
- ✓ Translates numbers into plain-language recommendations for decision-makers

YOUR TOOLKIT

The Tools Worth Learning First

There are dozens of data tools out there. These four cover the vast majority of entry-level data analyst job postings — learn these well before chasing anything else.

Tool	What It's For	Learn This First
Excel	Cleaning data, quick calculations, first summaries and reports	Core formulas, PivotTables, VLOOKUP/XLOOKUP
SQL	Querying and combining data across large, related tables	SELECT, WHERE, JOIN, GROUP BY
Power BI	Turning analysis into interactive, shareable dashboards	Data modeling, basic DAX, visual design
AI Tools	Accelerating analysis — summarizing data, drafting formulas, explaining results	Prompting effectively, verifying AI output

A Common Beginner Mistake

Trying to learn everything at once — a bit of Python, a bit of SQL, a bit of Tableau — without going deep on any one tool. Depth beats breadth in your first few months. Pick one tool, get genuinely comfortable, then add the next.

YOUR PLAN

A Simple Learning Roadmap

You don't need a fixed timeline to feel real — you need momentum. Here's a realistic pace for someone learning alongside work or school.

Months 1-2: Foundations

- ✓ Excel formulas and functions
- ✓ Cleaning a real, messy dataset
- ✓ Building your first PivotTable

Months 3-4: Querying

- ✓ SQL basics: SELECT, WHERE, ORDER BY
- ✓ JOINS across multiple tables
- ✓ GROUP BY and aggregate functions

Months 5-6: Visualization

- ✓ Power BI data modeling
- ✓ Basic DAX measures
- ✓ Building your first real dashboard

Ongoing: Portfolio

- ✓ One project per skill area, documented
- ✓ A short write-up per project: question, method, finding
- ✓ A resume and LinkedIn profile that show results

Next Step

If you'd rather skip the trial-and-error and follow a structured path with a real mentor, Excel/SQL/Power BI, and a portfolio-ready capstone — that's exactly what our programs are built for. See quantifiedinsights.net/programs or book a free consultation.