

12-WEEK PROGRAM

Business Analytics: From Fundamentals to Job-Ready

A practical, industry-oriented 3-month online course designed for early professionals, graduate students, and career-switchers. Build the analytical mindset, technical toolkit, and business acumen that today's employers demand — through structured learning, real-world case studies, and personalized mentoring.

Practical First

70–80% core concepts, 10–15% real industry applications

12 Weeks

Weekend recorded sessions + live 1:1 mentoring each week

Job-Ready

Aligned to current market roles and hiring expectations

Why Business Analytics Matters Right Now

The Data Economy is Here

Every business function — marketing, operations, finance, HR — now relies on data-driven decisions. Companies that embed analytics into their workflows consistently outperform competitors. The demand for professionals who can bridge business questions with data answers has never been higher.

- Analytics roles grew 25%+ year-over-year across industries
- Entry-level analysts earn 20–35% more than non-analytical peers
- SQL, Excel, and visualization are now baseline expectations

What This Course Addresses

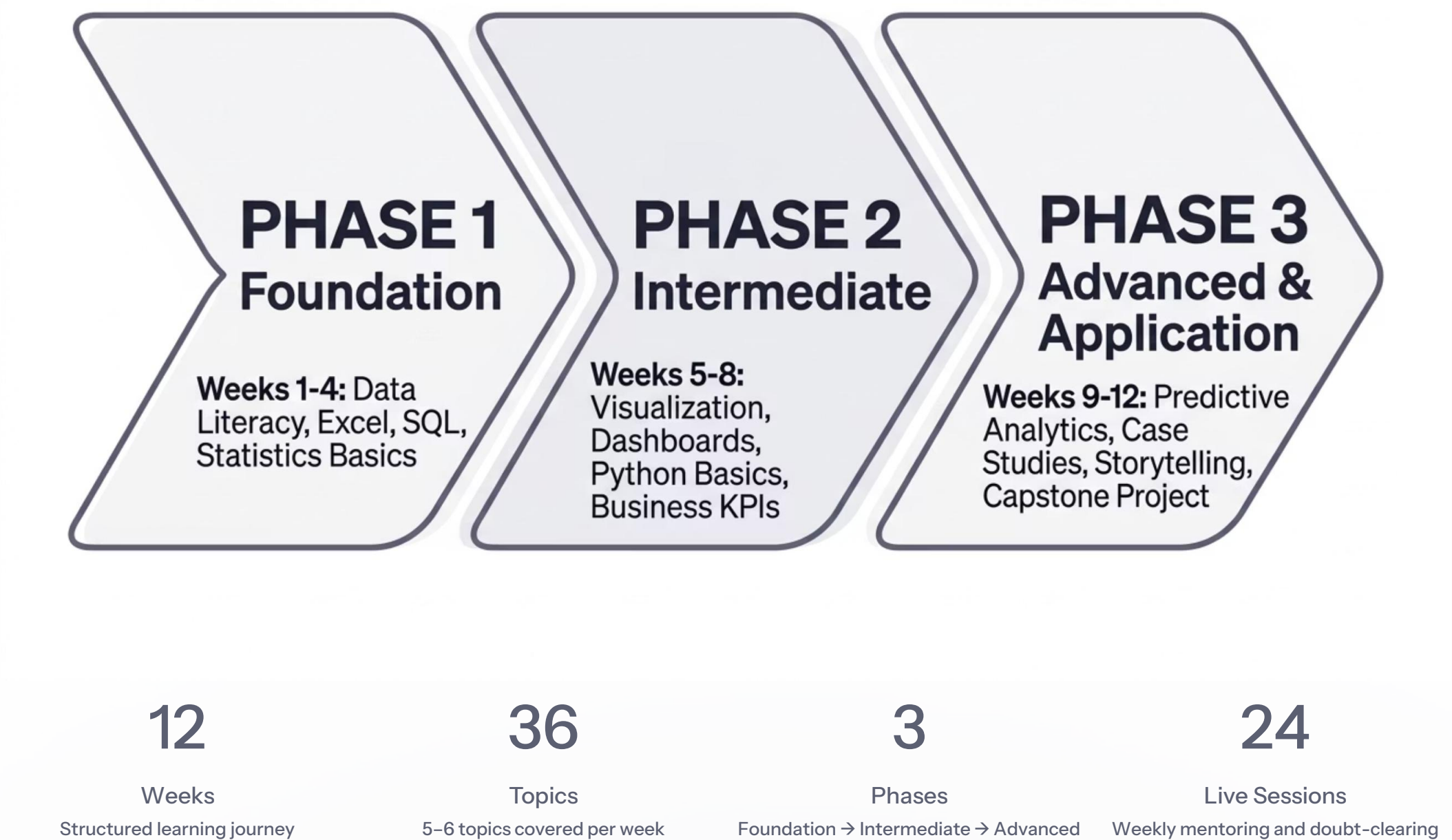
Most courses teach tools in isolation. This program builds the complete professional — analytical thinking, tool proficiency, storytelling with data, and stakeholder communication. You'll graduate able to contribute from day one.

Who This Is For

- Early professionals (0–4 years experience)
- Graduate students seeking industry edge
- Career-switchers entering analytics

Course Architecture at a Glance

The program is structured across three progressive phases, each building on the last — from foundational fluency to advanced application and career readiness.



PHASE 1 · WEEKS 1–4

Foundation Phase: Building Core Fluency

The first four weeks establish the analytical mindset and technical baseline every business analyst needs. No prior coding or statistics experience required — just curiosity and commitment.

1

Week 1 — Introduction to Business Analytics

- What is business analytics? Types: Descriptive, Diagnostic, Predictive, Prescriptive
- The analytics workflow: Problem → Data → Insight → Action
- Key business functions where analytics adds value
- Introduction to the data ecosystem (databases, BI tools, cloud)
- Setting up your analytics toolkit (Excel, Google Sheets, free SQL editors)
- Mini-assignment: Map an analytics problem in your current or target industry

2

Week 2 — Data Fundamentals & Excel Mastery

- Data types, data quality, and data governance basics
- Data cleaning techniques: handling nulls, duplicates, formatting errors
- Excel: PivotTables, VLOOKUP/XLOOKUP, IF/IFS, SUMIFS
- Introduction to structured thinking with data
- Building simple summary tables and trend views
- Assignment: Clean and summarize a provided messy dataset in Excel

3

Week 3 — SQL for Business Analysts

- Relational database concepts: tables, keys, relationships
- Core SQL: SELECT, WHERE, GROUP BY, ORDER BY, HAVING
- JOINS explained: INNER, LEFT, RIGHT with business context
- Aggregate functions: COUNT, SUM, AVG, MAX, MIN
- Writing queries to answer real business questions
- Assignment: Write 10 SQL queries on a provided e-commerce database

4

Week 4 — Statistics for Decision-Making

- Descriptive statistics: mean, median, mode, standard deviation
- Distributions and what they tell you about your data
- Correlation vs. causation — a critical business distinction
- Probability basics: risk and uncertainty in business
- Hypothesis thinking: null hypothesis, p-value intuition (no formulas)
- Mini-project: Statistical summary report of a real dataset

Foundation Phase: What You'll Walk Away With

Learning Outcomes by Week 4

- **Analytical vocabulary** — speak the language of data fluently with business stakeholders
- **Excel proficiency** — clean, transform, and summarize datasets confidently
- **SQL baseline** — query relational databases to extract business insights
- **Statistical intuition** — interpret data distributions and avoid common analytical traps

Tools Introduced in Phase 1

Microsoft Excel /
Google Sheets

Data cleaning, PivotTables,
formulas

MySQL / PostgreSQL
(free)

Relational queries and JOINS

DB Fiddle / SQLiteOnline

Browser-based SQL practice

📋 All tools in Phase 1 are free or freely available. No paid subscriptions required to complete the first month.

PHASE 2 • WEEKS 5–8

Intermediate Phase: Visualization, BI Tools & Business KPIs

With the fundamentals in place, Phase 2 focuses on turning raw data into compelling business stories — using industry-standard BI platforms, KPI frameworks, and Python for automation.

1

Week 5 — Data Visualization Principles

- Why visualization matters: from data to decision
- Chart selection guide: bar, line, scatter, heatmap — when to use each
- Gestalt principles applied to data visuals
- Color theory for dashboards: accessibility and impact
- Common visualization mistakes and how to avoid them
- Assignment: Redesign three poorly-built charts with correct principles

2

Week 6 — Power BI & Tableau Fundamentals

- Introduction to BI platforms: Power BI vs. Tableau vs. Looker
- Connecting data sources, building relationships in Power BI
- Creating calculated columns and measures with DAX basics
- Building your first interactive dashboard
- Publishing, sharing, and governance in Power BI Service
- Assignment: Build a sales performance dashboard using a provided dataset

3

Week 7 — KPIs, Metrics & Business Frameworks

- What makes a good KPI? The SMART criteria applied to metrics
- Key business metrics by function: Sales, Marketing, Finance, Operations
- Building a metrics tree: from company goals to individual KPIs
- OKRs vs. KPIs — understanding both in professional settings
- Introduction to cohort analysis and customer segmentation
- Assignment: Design a KPI framework for a given business scenario

4

Week 8 — Python for Analytics (Beginner)

- Why Python? When to use Python vs. Excel vs. SQL
- Python setup: Jupyter Notebooks, Anaconda/Google Colab
- Pandas fundamentals: loading, filtering, grouping dataframes
- Basic data visualization with Matplotlib and Seaborn
- Automating repetitive Excel tasks with Python scripts
- Mini-project: End-to-end data analysis notebook (load → clean → visualize)

PHASE 2 · OUTCOMES

Intermediate Phase: Tools & Outcomes

By Week 8, You Can:

- Build interactive dashboards in Power BI or Tableau
- Design KPI frameworks aligned to business goals
- Write Python scripts to automate data workflows
- Apply visualization best practices to real business data
- Speak confidently about metrics in cross-functional meetings

Phase 2 Technology Stack



Power BI & Tableau

Industry-standard BI platforms used in 80%+ of Fortune 500 analytics teams



Python (Pandas, Seaborn)

The most in-demand programming language for data analysis and automation



KPI Frameworks

Structured thinking tools used by analytics managers to align data to strategy

PHASE 3 • WEEKS 9–12

Advanced & Application Phase: Predict, Present & Deliver

The final phase elevates your skills to job-ready status — introducing predictive modeling, stakeholder communication, and a capstone project that mirrors real workplace deliverables.

1

Week 9 — Predictive Analytics & Forecasting

- Introduction to predictive vs. descriptive analytics
- Linear regression: intuition, interpretation, and business use cases
- Time-series forecasting: trends, seasonality, and moving averages
- Model evaluation basics: RMSE, MAE, R-squared explained simply
- Using Excel Forecast Sheet and Python's statsmodels for prediction
- Assignment: Build a 3-month sales forecast model for a retail dataset

2

Week 10 — Machine Learning Fundamentals for Analysts

- What ML means for business analysts (not data scientists)
- Supervised learning: classification and regression use cases
- Decision trees and random forests — intuitive explanations
- Clustering: customer segmentation with K-Means
- Using scikit-learn for basic ML workflows in Python
- Assignment: Segment a customer base using K-Means and interpret the results

3

Week 11 — Storytelling with Data & Stakeholder Communication

- The pyramid principle: structuring analytical narratives
- Insight vs. finding vs. recommendation — critical distinctions
- Designing executive-ready presentations and dashboards
- Handling pushback: defending your analysis with data confidence
- Writing effective analytical memos and business reports
- Assignment: Present a 5-minute insight presentation to your mentor group

4

Week 12 — Capstone Project & Career Readiness

- End-to-end business analytics case: problem → data → model → recommendation
- Building your analytics portfolio (GitHub, Tableau Public, LinkedIn)
- Resume and interview preparation for analytics roles
- Mock analytical interview: case study + SQL + behavioral questions
- Peer review and mentor feedback on capstone deliverables
- Final project: Full analytics report with dashboard, insights, and recommendations

Industry Example #1: Retail Sales Optimization

The Business Problem

A national retail chain with 200+ stores was experiencing inconsistent sales performance across regions. Leadership could not determine whether underperformance was driven by pricing, inventory gaps, local competition, or foot traffic patterns. Decisions were being made on gut instinct rather than data.

How Analytics Was Applied

- SQL queries extracted 18 months of transactional data from the ERP system
- Descriptive analytics segmented stores by performance tier
- Correlation analysis linked inventory stockout rates to revenue drops
- Power BI dashboard built for regional managers — updated weekly
- Forecast model predicted demand by SKU category for the next quarter

Tools Used

- SQL (data extraction from Oracle ERP)
- Python (Pandas for cleaning, statsmodels for forecasting)
- Power BI (regional performance dashboards)
- Excel (ad hoc analysis for store managers)

Measurable Business Impact

- 12% reduction in stockout incidents within 2 quarters
- 8% increase in same-store sales for bottom-quartile stores
- Weekly reporting cycle reduced from 3 days to 4 hours

Role of Early Professionals

Junior analysts owned the SQL extraction layer, built the Power BI dashboards, and prepared weekly briefing decks for regional managers — high visibility work with direct business impact.

Industry Example #2: Customer Churn Reduction in SaaS

The Business Problem

A B2B SaaS company with 5,000 active accounts was losing 4–6% of customers monthly. The customer success team had no early warning system — they only learned about churn after the customer had already left. Each churned account represented \$8,000–\$15,000 in lost annual recurring revenue.

Tools Used

- Python (scikit-learn for logistic regression churn model)
- Tableau (churn risk dashboard by account tier)
- SQL (feature extraction from product usage database)
- Salesforce integration (surfacing risk scores in CRM)

How Analytics Was Applied

- Product usage data (logins, feature adoption, support tickets) was extracted via SQL
- A logistic regression model predicted churn probability for each account
- Accounts scored "high risk" 45 days before renewal triggered customer success outreach
- Tableau dashboard surfaced risk tiers for account managers each Monday

Measurable Business Impact

- Monthly churn reduced from 5.2% to 2.8% within one year
- \$1.2M in ARR protected in the first six months post-deployment
- Customer success team efficiency improved — 40% fewer reactive "save" calls

Role of Early Professionals

Junior data analysts built and maintained the feature engineering pipeline, updated the Tableau dashboard weekly, and documented model assumptions for non-technical stakeholders.

Industry Example #3: Supply Chain Analytics in Manufacturing

The Business Problem

A mid-sized consumer goods manufacturer was experiencing unpredictable production delays caused by supplier delivery variability. Procurement decisions were made using static spreadsheets, causing either overstock (tying up working capital) or stockouts (halting production lines). The cost of these inefficiencies exceeded \$3M annually.

How Analytics Was Applied

- Historical supplier performance data was loaded into a PostgreSQL database
- Python time-series models forecast raw material demand by plant
- Supplier scorecards built in Power BI ranked vendors by reliability, lead time, and cost
- KPI framework established: on-time delivery rate, order fill rate, inventory turnover
- Scenario analysis modeled the impact of switching to alternative suppliers

Tools Used

- PostgreSQL (centralized supplier and inventory database)
- Python (Prophet library for demand forecasting)
- Power BI (supplier scorecard and inventory health dashboards)
- Excel (scenario modeling for procurement leadership)

Measurable Business Impact

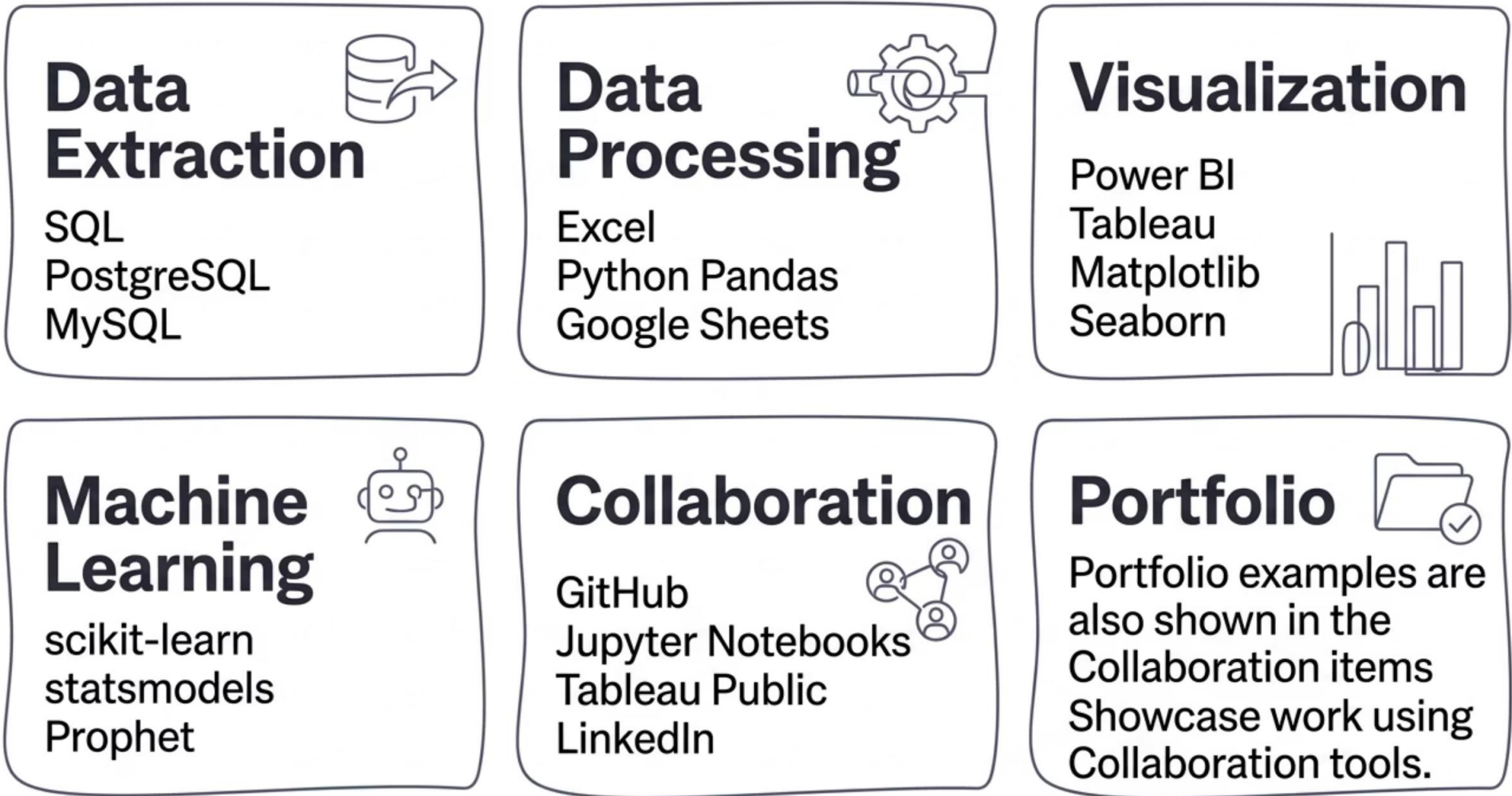
- Inventory holding costs reduced by 18% in two quarters
- Production line stoppages dropped by 31% year-over-year
- Procurement team renegotiated 4 supplier contracts using data-backed evidence

Role of Early Professionals

Junior analysts owned the supplier data pipeline, maintained weekly scorecard refreshes, and prepared scenario analysis summaries for procurement leadership presentations — gaining direct exposure to executive-level decision-making.

Tools & Technology Stack Overview

This course is deliberately tool-agnostic in philosophy but tool-specific in practice. You will graduate proficient in the exact technologies that appear most frequently in analytics job descriptions today.



Free Tools (Use Throughout)

- Google Colab — Python notebooks, no installation needed
- DB Fiddle / SQLiteOnline — browser SQL practice
- Power BI Desktop — free Windows application
- Tableau Public — free for public portfolio projects

Why This Stack?

- SQL: Required in 90%+ of analyst job postings
- Python: Most in-demand analytics language globally
- Power BI / Tableau: Top two BI tools by enterprise adoption
- GitHub: Expected for portfolio demonstration in interviews

Weekly Learning Structure

Every week follows a consistent rhythm — structured enough to build habits, flexible enough to accommodate working professionals and students with varied schedules.

Recorded Session

Weekend concept video (3–4 hrs). Watch at your own pace. Includes guided exercises and reading references.

Live Mentoring Session

Weekend 1:1 or small-group session (60–90 mins).
Doubt clearing, assignment review, and case discussion.



Practice Assignment

Hands-on task applying the week's concepts to a real or simulated dataset. Expected time: 2–3 hours.

Weekly Reflection

Short written reflection: What did you learn? What is still unclear? What would you apply at work?

 **Time Commitment:** Approximately 6–8 hours per week — including recorded sessions, assignments, live mentoring, and self-directed practice. Designed to be manageable alongside full-time work or studies.

Skills Mapping: Beginner → Job Ready

Track your progression across the three phases. Each milestone represents the skills you'll have demonstrated through assignments, projects, and live sessions by the end of that phase.



Career & Job Role Alignment

This course directly maps to the most in-demand analytics roles in today's job market. Each role below reflects skills you'll have developed by course completion.

Business Analyst

- Requirements gathering, KPI reporting
- Excel, SQL, PowerPoint storytelling
- Entry salary: \$55K–\$75K

Data Analyst

- SQL, Python, BI dashboards
- Ad hoc analysis, metric design
- Entry salary: \$65K–\$90K

Analytics Consultant

- Client-facing insights delivery
- Storytelling, frameworks, tools
- Entry salary: \$70K–\$95K

Operations Analyst

- Process optimization, forecasting
- Supply chain and logistics metrics
- Entry salary: \$58K–\$80K

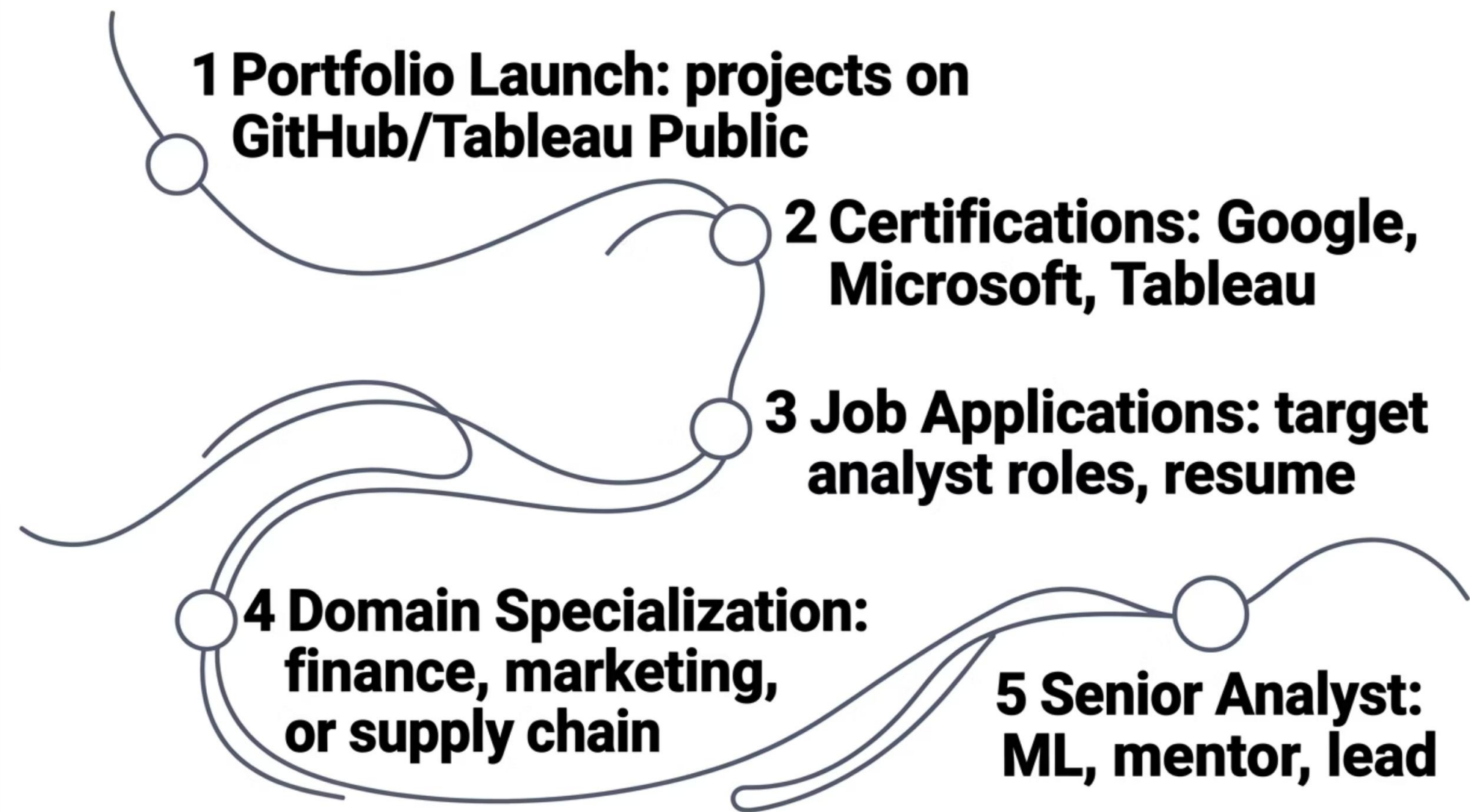
Marketing Analyst

- Campaign performance, cohort analysis
- Customer segmentation, attribution
- Entry salary: \$55K–\$78K

Salary ranges are approximate U.S. market benchmarks for 0–2 years of experience (2024–2025). Actual compensation varies by geography, industry, and company size.

Your Post-Course Roadmap

Completing this course is the beginning, not the end. Here's the recommended path to accelerate your career in business analytics after Week 12.



Certifications to Pursue Next

- **Google Data Analytics Certificate** — beginner-friendly, highly recognized
- **Microsoft PL-300** — Power BI Data Analyst Associate
- **Tableau Desktop Specialist** — industry-recognized visualization credential
- **AWS Cloud Practitioner** — valuable if moving toward cloud analytics

Portfolio Must-Haves

- End-to-end SQL analysis project with documented findings
- Interactive Power BI or Tableau dashboard (published publicly)
- Python notebook: data cleaning + EDA + visualization
- Predictive model with business narrative (from Week 9)
- Capstone case study — your "hero" portfolio project

Key Takeaways

Everything in this course is designed around one goal: making you immediately valuable as an analytics professional. Here's what defines this program.



Strong Fundamentals First

70–80% of the course builds deep, transferable core skills — SQL, statistics, Excel, Python, and visualization. These skills remain valuable regardless of which industry or tool stack you land in.



Real Industry Context

Every concept is anchored to a real business problem — from retail forecasting to SaaS churn to supply chain optimization. You learn the "why" alongside the "how."



Mentored, Not Just Recorded

Weekly live sessions ensure you don't get stuck, receive personalized feedback, and develop the communication skills that separate good analysts from great ones.



Portfolio-Ready Outcomes

By Week 12, you have completed projects you can show to employers — not just a certificate, but actual evidence of your analytical capability across the full workflow.

 **Remember:** The most successful analysts are not just technically skilled — they communicate clearly, understand business context, and deliver recommendations that drive action. This course trains all three.