Data Analytics With GenAI Master's Program

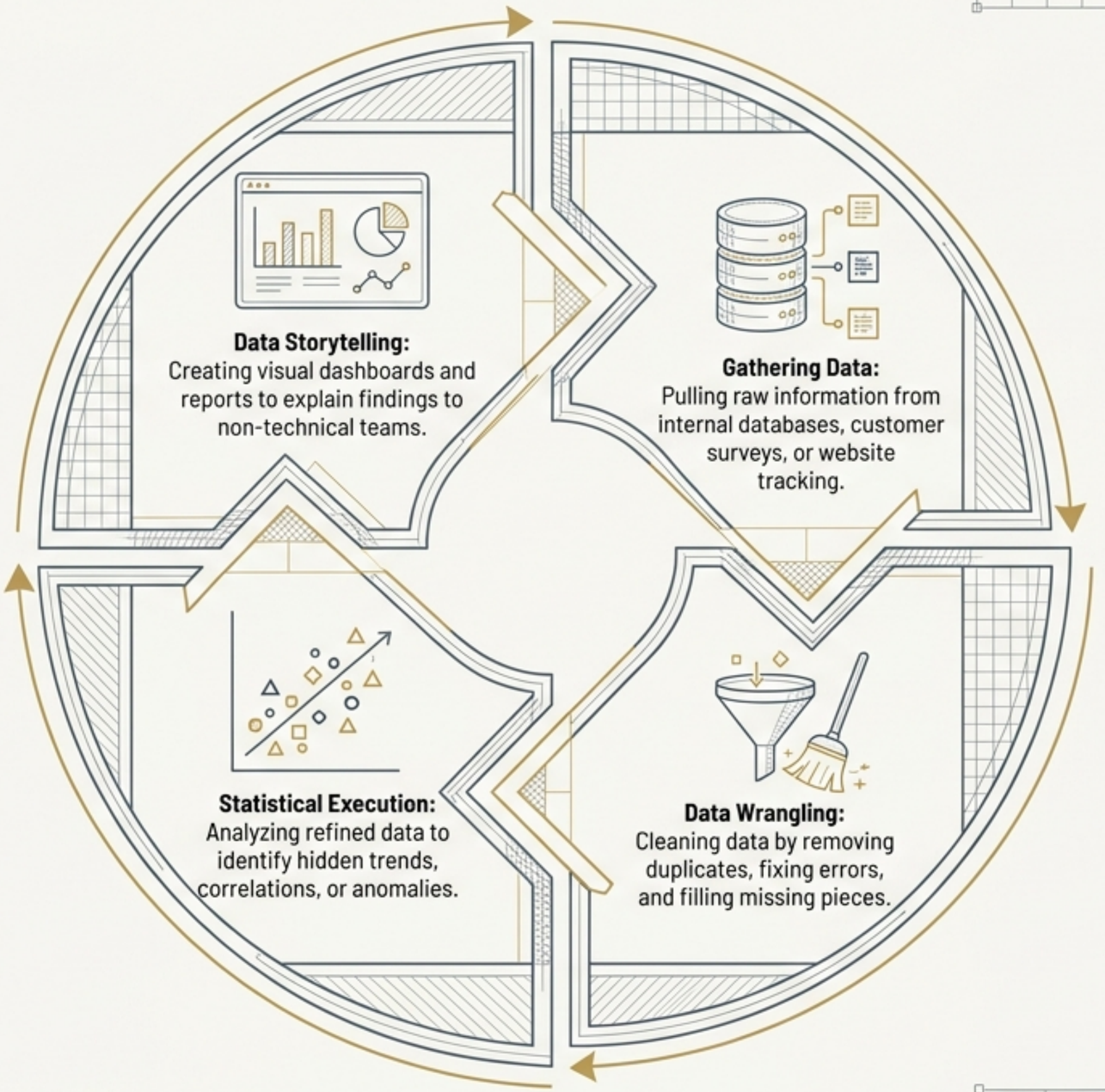
Engineered for the Modern Data Professional

Strategic Trust Banner

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The Business Detective

A data analyst collects, cleans, and interprets complex datasets to solve business problems and make evidence-based decisions.



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The Real-World Lifecycle of a Data Project



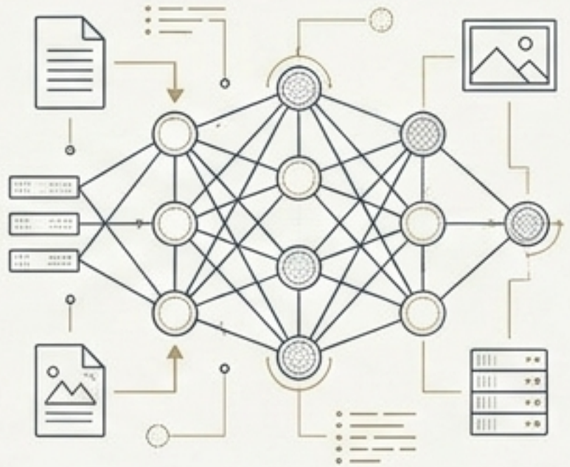
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Understanding Generative AI

Artificial intelligence designed to create entirely new, original content like text, images, videos, music, or code.

Step 1: Forming a Database

A neural network trains on various media files, text, and data.



Step 2: Inputting a Prompt

The user provides a description. Example: "Write the definition of machine learning in 50 words."



Step 3: Generating Content

The AI uses its network to generate similar new examples.



Output: "Machine learning is a branch of branch of artificial intelligence where computers learn from data without explicit programming. By analyzing massive datasets, algorithms identify hidden patterns and build mathematical models..."

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The Most Sought After Combo by Businesses

Why adding GenAI to Data Analytics completely changes how you work:

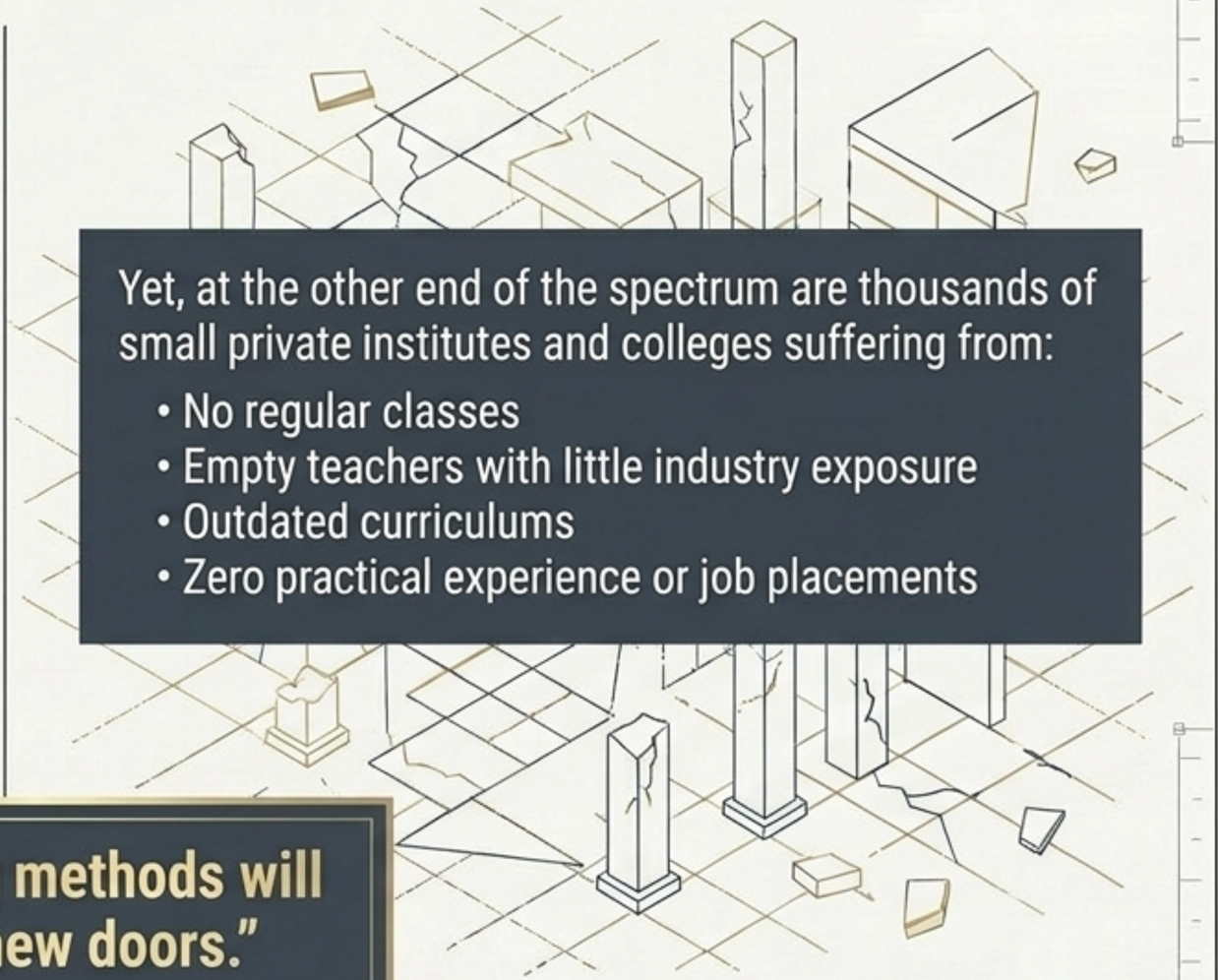
Traditional Data Analyst	GenAI-Empowered Data Analyst
From “What Happened” (Sales dropped 10%).	To “What to Do” (Simulates future scenarios and writes automated recommendations).
Analysts spend 80% of time cleaning messy data and writing SQL queries.	Automates code generation, spots anomalies, and cleans massive datasets in seconds. **10x Faster.**
Raw spreadsheets or confusing dashboards.	Instantly translates complex findings into plain-English summaries and executive reports.
Basic data entry and simple dashboards are rapidly being automated.	By managing AI workflows, you stay ahead of automation rather than being replaced by it.

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The Strange Paradox of Indian Education



India's top institutes have churned out global business chiefs like Alphabet Inc.'s Sundar Pichai and Microsoft Corp.'s Satya Nadella.



Yet, at the other end of the spectrum are thousands of small private institutes and colleges suffering from:

- No regular classes
- Empty teachers with little industry exposure
- Outdated curriculums
- Zero practical experience or job placements

"Old learning methods will not open new doors."

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The iViRTH Mentorship Solution

Other Courses

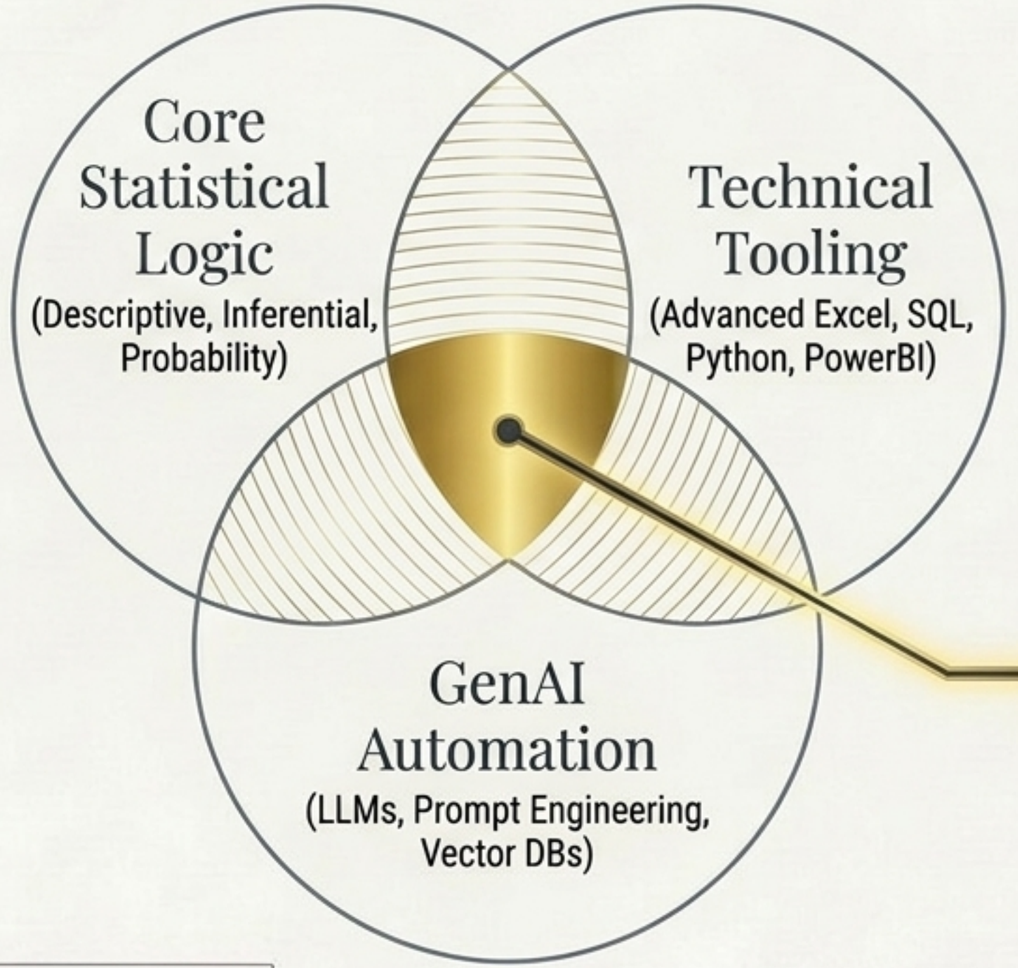
- Facilitated by someone with or without industry experience.
- Impersonal, transactional relationship. Support only at the time of training.
- Trainee may not be motivated; limited interaction after the event.
- New skills may or may not transfer back to work.

The Great Indian Campus Model

- 1:1 Mentorship with industry-vetted experts.
- Highly personalized, social experience driving 2X faster doubt clearing.
- 2 Years free LMS Access to exact class recordings.
- 100% practical, project-driven learning ensuring real-world skill application.
- Mentee gains immediate awareness, confidence, and ability to iterate.

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The Modern Analyst's Moat



The Unreplaceable Analyst

The human who manages the AI workflow to analyze data becomes infinitely more valuable than the AI itself.

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Who is this Blueprint For?

No advanced math or programming background required.

Career Changers

Retail workers escaping shift work,

Teachers leveraging research skills,

Admin staff transitioning to strategic roles.

Upskilling Professionals

Marketers calculating ROI,

Product/Project Managers backing up decisions,

Financial Analysts moving beyond Excel.

Fresh Graduates

Non-STEM majors adding technical skills,

STEM students bridging the gap between college theory and employment.



Naturally Curious
(Asking “Why”)



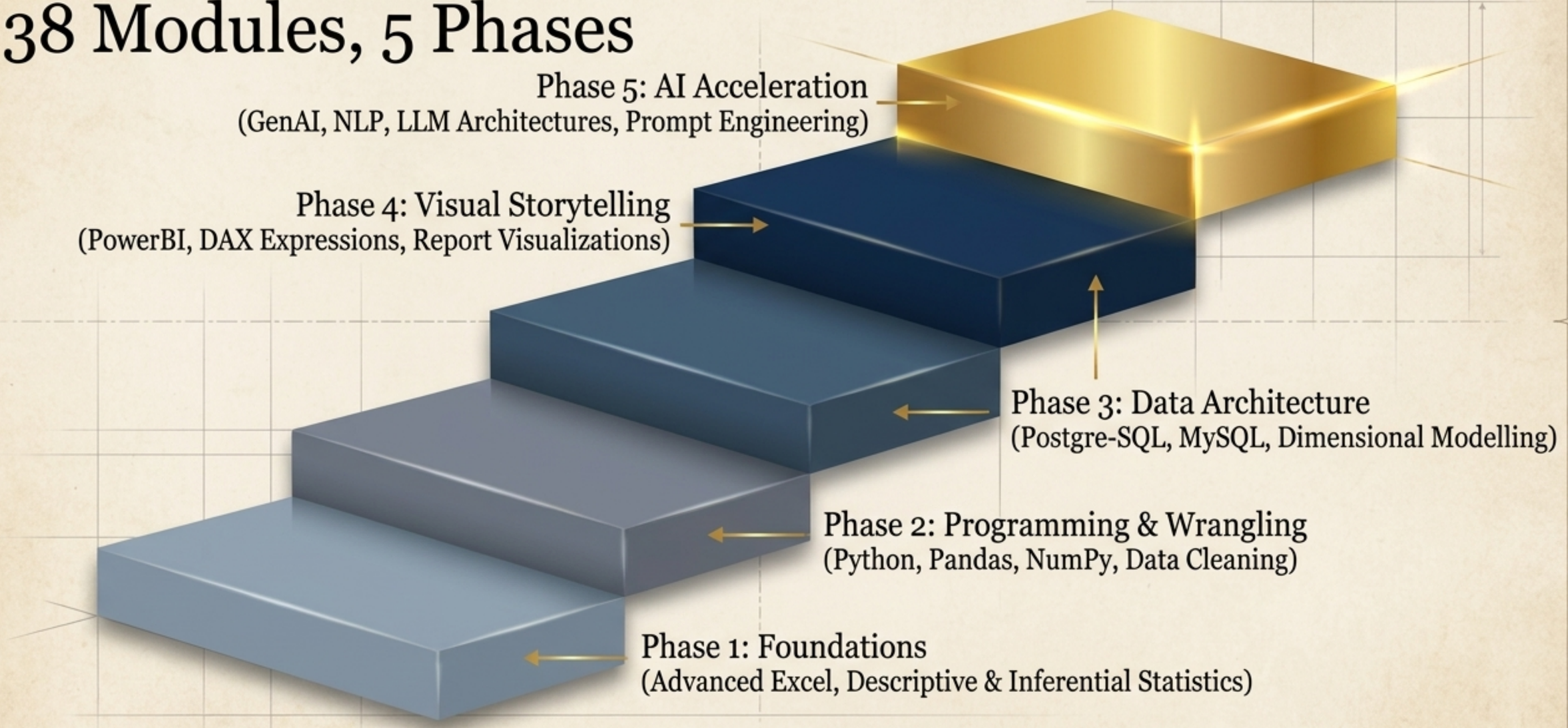
Problem Solvers
(Finding patterns)



Visual Storytellers
(Explaining complex ideas)

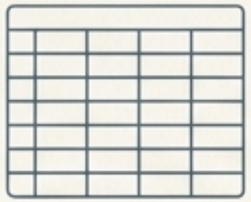
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The Curriculum Blueprint: 38 Modules, 5 Phases



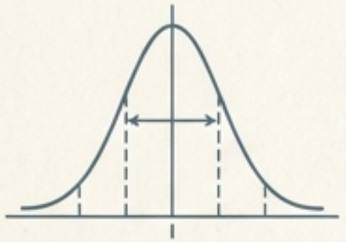
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Phase 1: Foundations of Data & Statistics



Excel Mastery:

- Lookup Functions (VLOOKUP, HLOOKUP, XLOOKUP) & Pivot Tables
- Advanced Data Analysis: What-If Analysis, Goal Seek, Scenario Manager, Moving Averages.

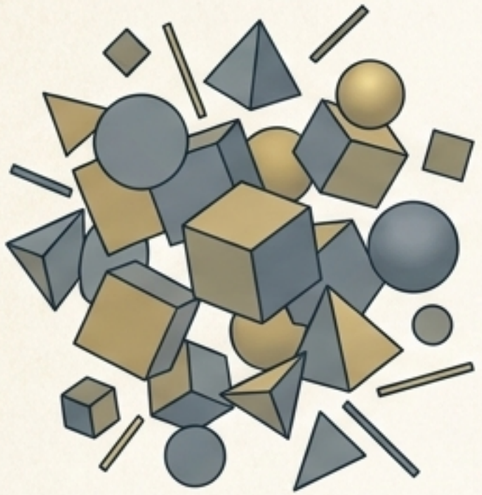


Mathematics & Statistics:

- Descriptive Statistics: Mean, Median, Standard Deviation, Skewness, Variance, RMSE.
- **Inferential Statistics:** Population vs. Sample, T-test, Chi-square, Anova, P-value, Confidence Intervals.
- **Probability:** Normal, Uniform, and Skewed Distributions; Z-scores.

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Phase 2: Programming & Wrangling

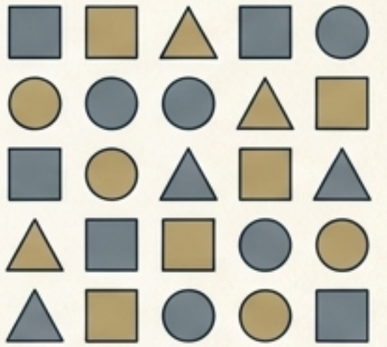


Python Foundations:

- Anaconda setup, Data Types, Control Flow (Loops, If/Else), Data Structures (Lists, Tuples, Dictionaries), Lambda Functions.

Data Wrangling:

- Missing Values Handling, Outlier Detection and Imputation.
- Standard Scaler, Normalization, Transformations.



Advanced Packages & Analysis:

- Working with Pandas (Data Frames) and NumPy (Arrays).
- Exploratory Data Analysis (EDA) using Matplotlib & Seaborn.
- Visuals: 3D scatterplots, Heatmaps, Violin plots, Cumulative Distribution Functions (CDF).

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Phase 3: Database Fundamentals (SQL)

Database Management:

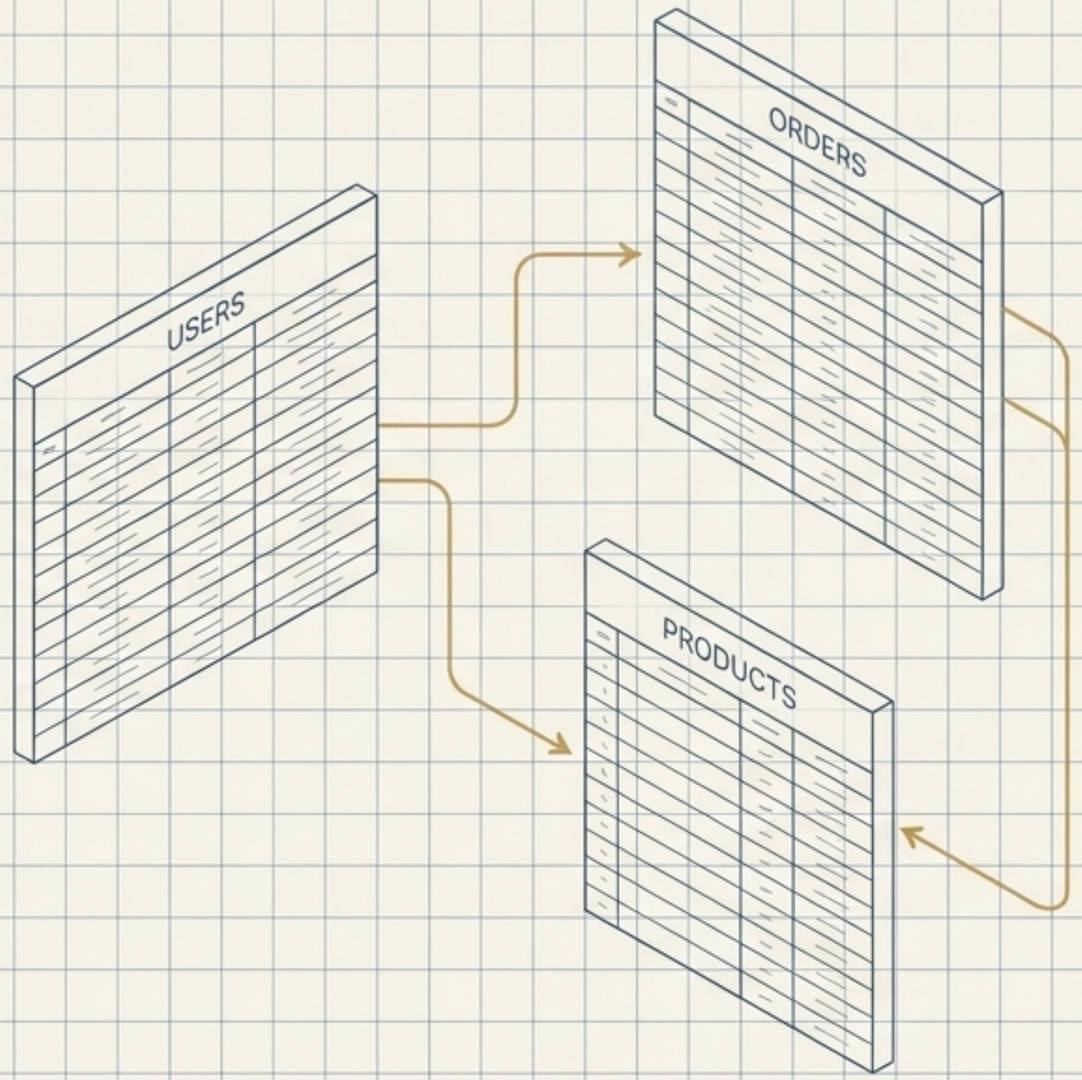
- Installing and utilizing Postgre-SQL and MYSQL.
- DDL & DML Commands: CREATE, INSERT, UPDATE, DROP, TRUNCATE.

Querying & Logic:

- Aggregate Functions, Group By, Subqueries, Nested/Inner Queries.
- Joins (Natural, Inner, Outer).
- Window Functions: SUM, MAX, Average, Rank, Partition, Order by.

Advanced Architecture:

- Normalisation and Dimensional Modelling.
- Views, Stored Procedures, and Temporary Table creation.



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Phase 4: Visual Storytelling (Power BI)

Dashboard Creation:

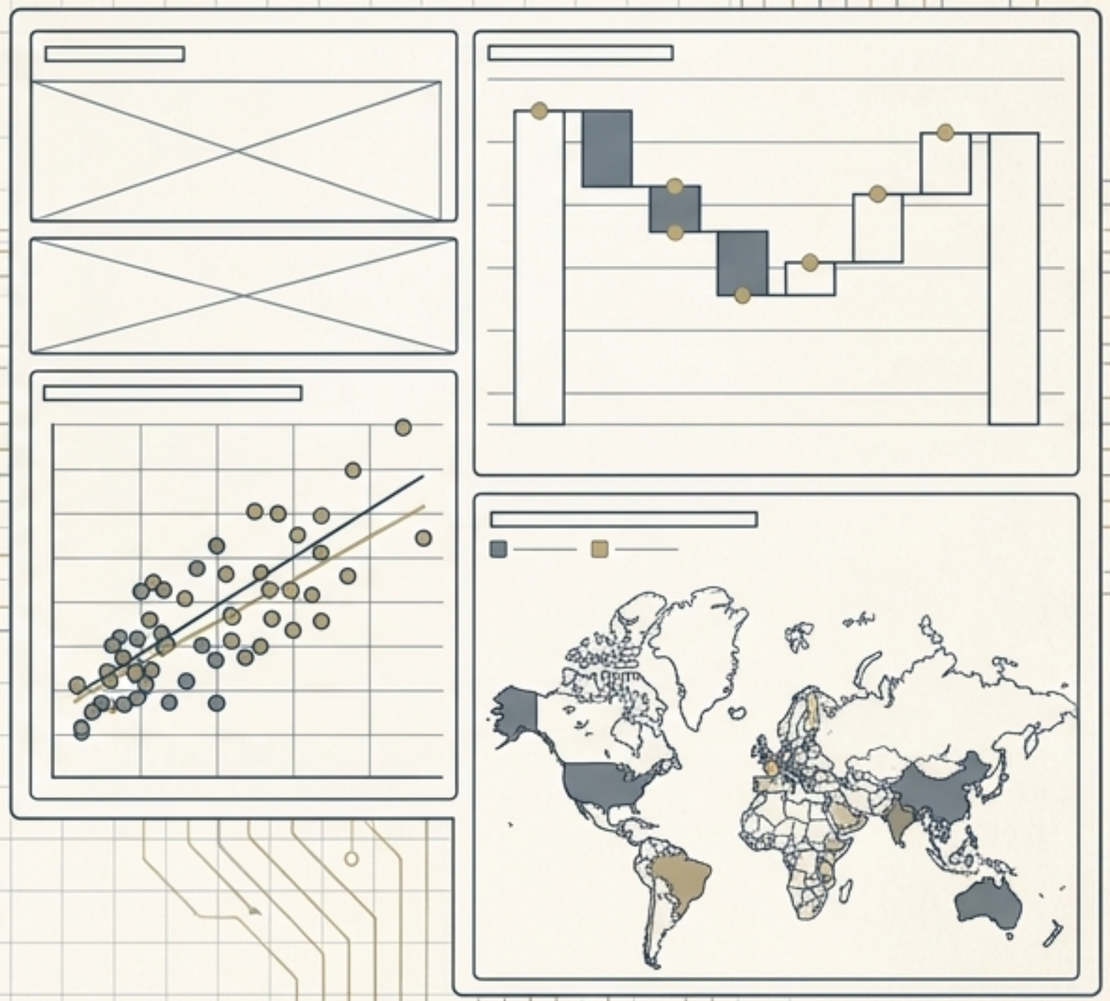
- Power BI Architecture, Direct Query Options, and Cloud Deployment.
- Chart Properties: Waterfall, Scatter, Pie, Clustered Bar, Area charts, and Map Reports.

Interactive Elements:

- Hierarchies, Drilldown Reports, Auto Filters, and Page-Level formatting.

Advanced Computations:

- Power Query & M Language (Merge/Anti-Joins, Applied Steps).
- DAX Expressions (Level 1 & 2): Row/Filter Context, Calculated Columns, Time Intelligence Functions (YTD, QTD, MTD).



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Phase 5: AI Acceleration & GenAI

Natural Language Processing:

- Tokenization and Data Cleaning (Trimming, Case Conversion, Imputations).

Large Language Models (LLMs):

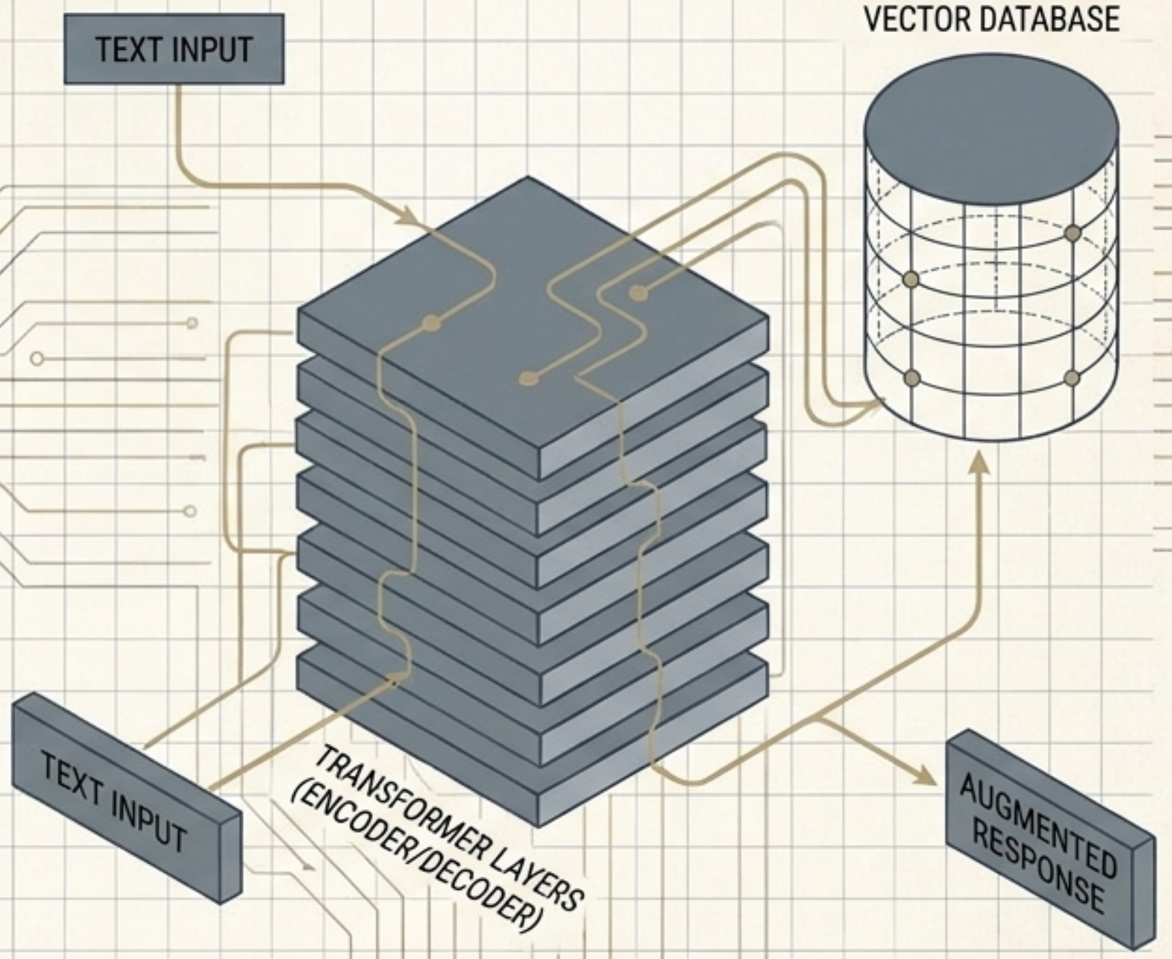
- Next Word Prediction, Text Response, Embeddings, Sentiment Analysis.

GPT Architecture & Databases:

- Transformer Architecture & Attention Mechanisms. Pre-Training vs Fine-Tuning.
- Open-Source Vector Databases: Chroma and Milvus (Nearest Neighbour Search, Indexing).

Applied GenAI:

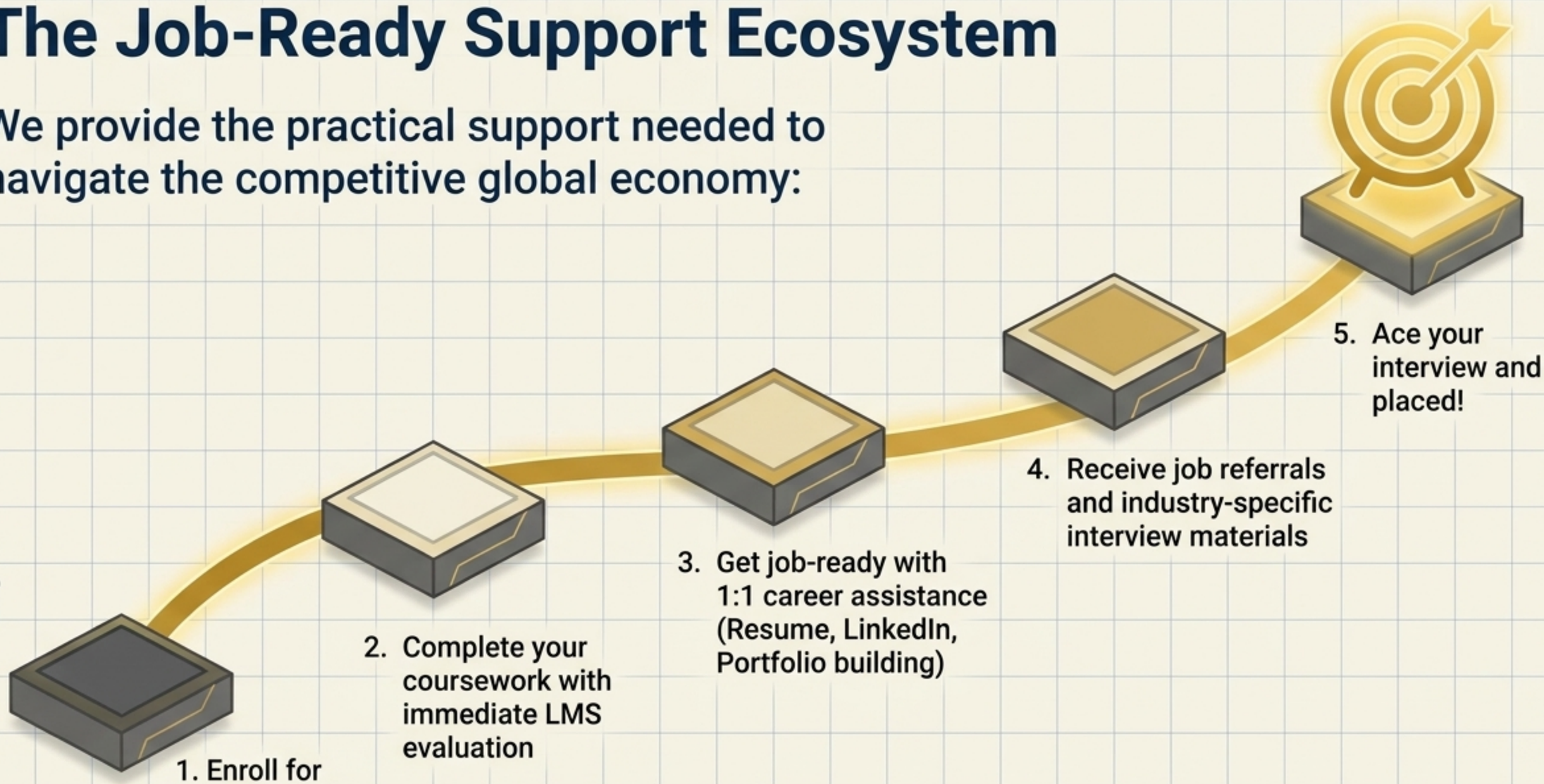
- Art of Prompt Engineering. Building applications via Google Free APIs.
- Case Study: Enhancing customer support with GPT-based chatbots.



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The Job-Ready Support Ecosystem

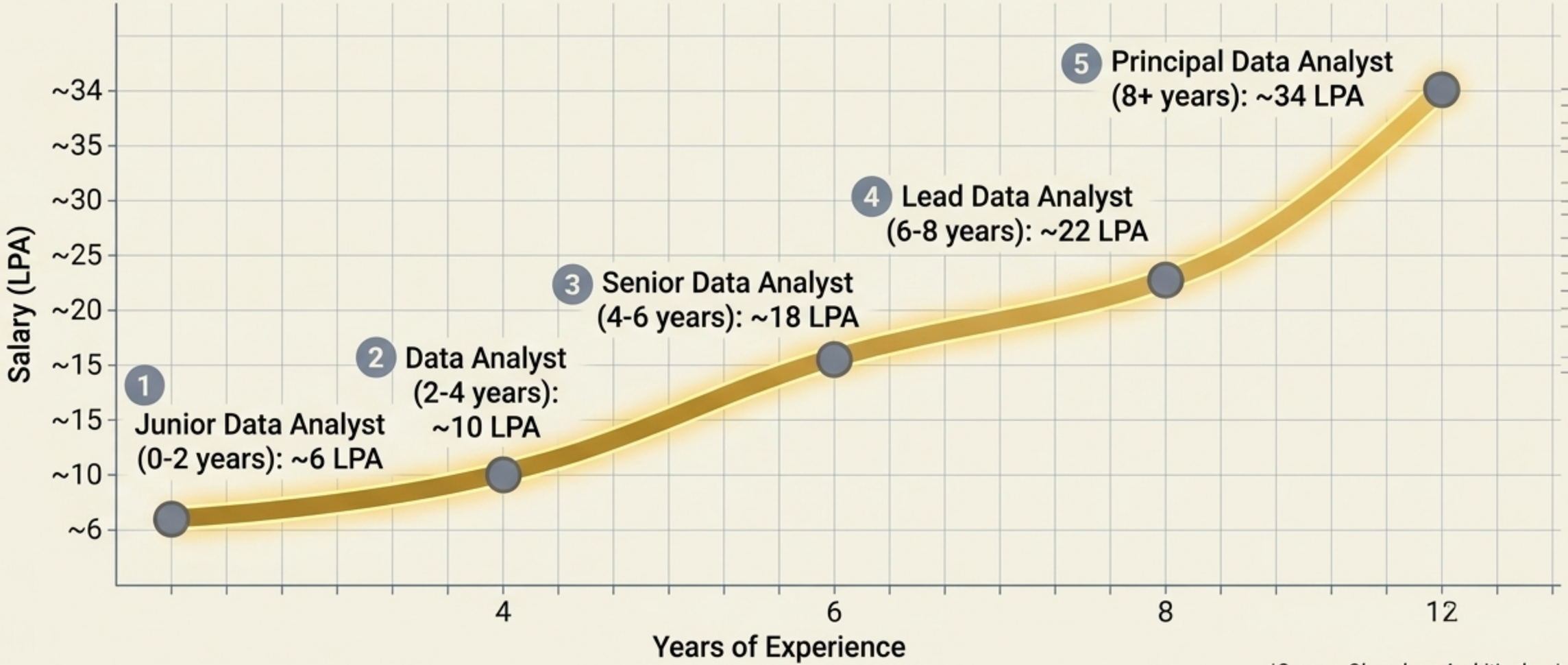
We provide the practical support needed to navigate the competitive global economy:



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Career Trajectory and Salary Trends

The data analytics boom ensures high demand and lucrative compensation.



Source: Glassdoor, Ambitionbox

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Build Your Brighter Data Analytics Career

Let The Great Indian Campus by iViRTH help you find the right job.

LIVE CAREER ACCELERATOR PROGRAM

Enrollment Fee: ₹ 2000

Contact: enroll@ivirth.com

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Account Type: Current Account

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