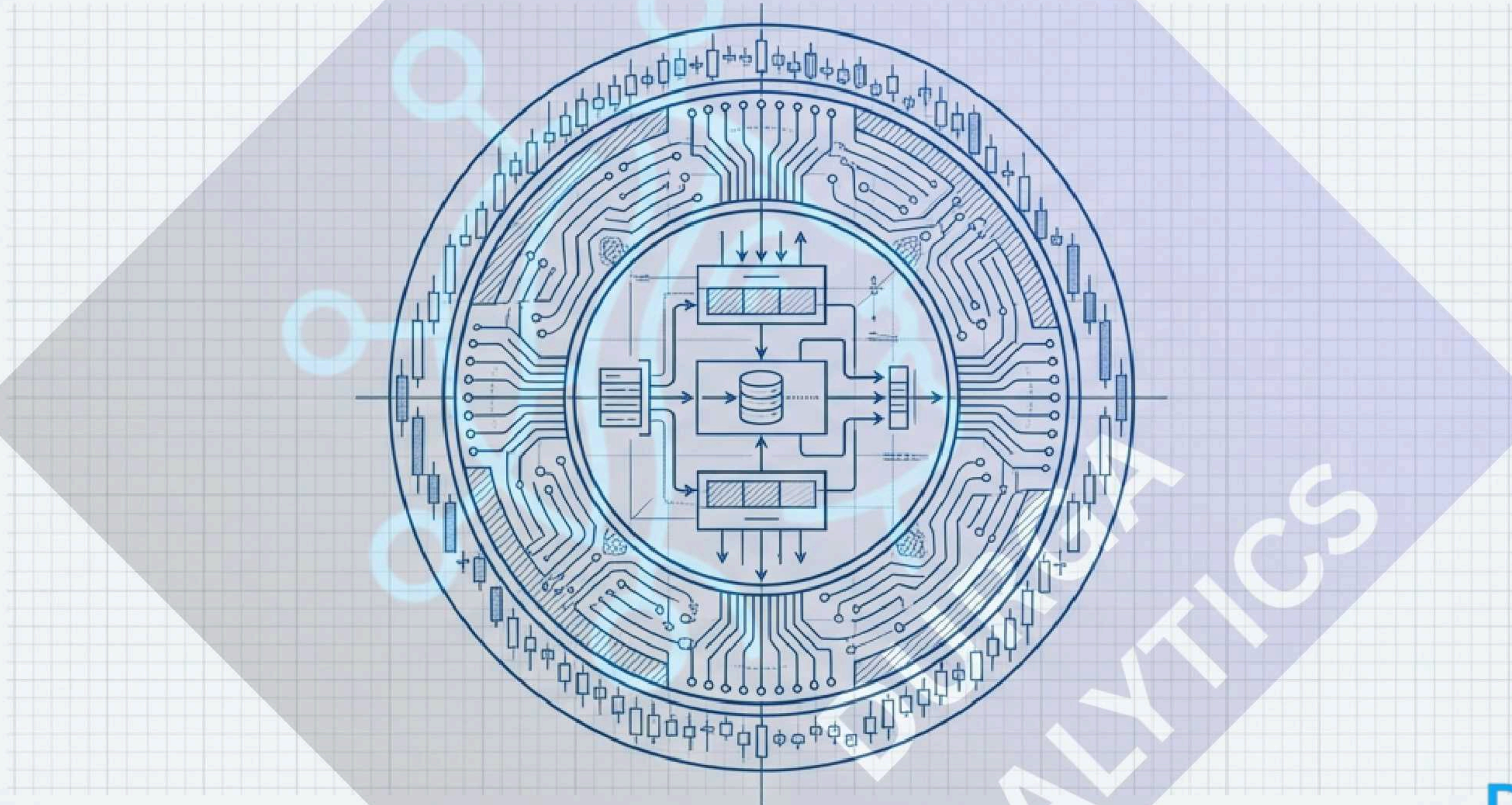


CAPITAL MARKETS DATA & AI ENGINEERING PROGRAM

The Architectural Blueprint for a Director/VP Career Track



Engineered to transition elite practitioners into **\$500K-\$900K+** leadership roles.

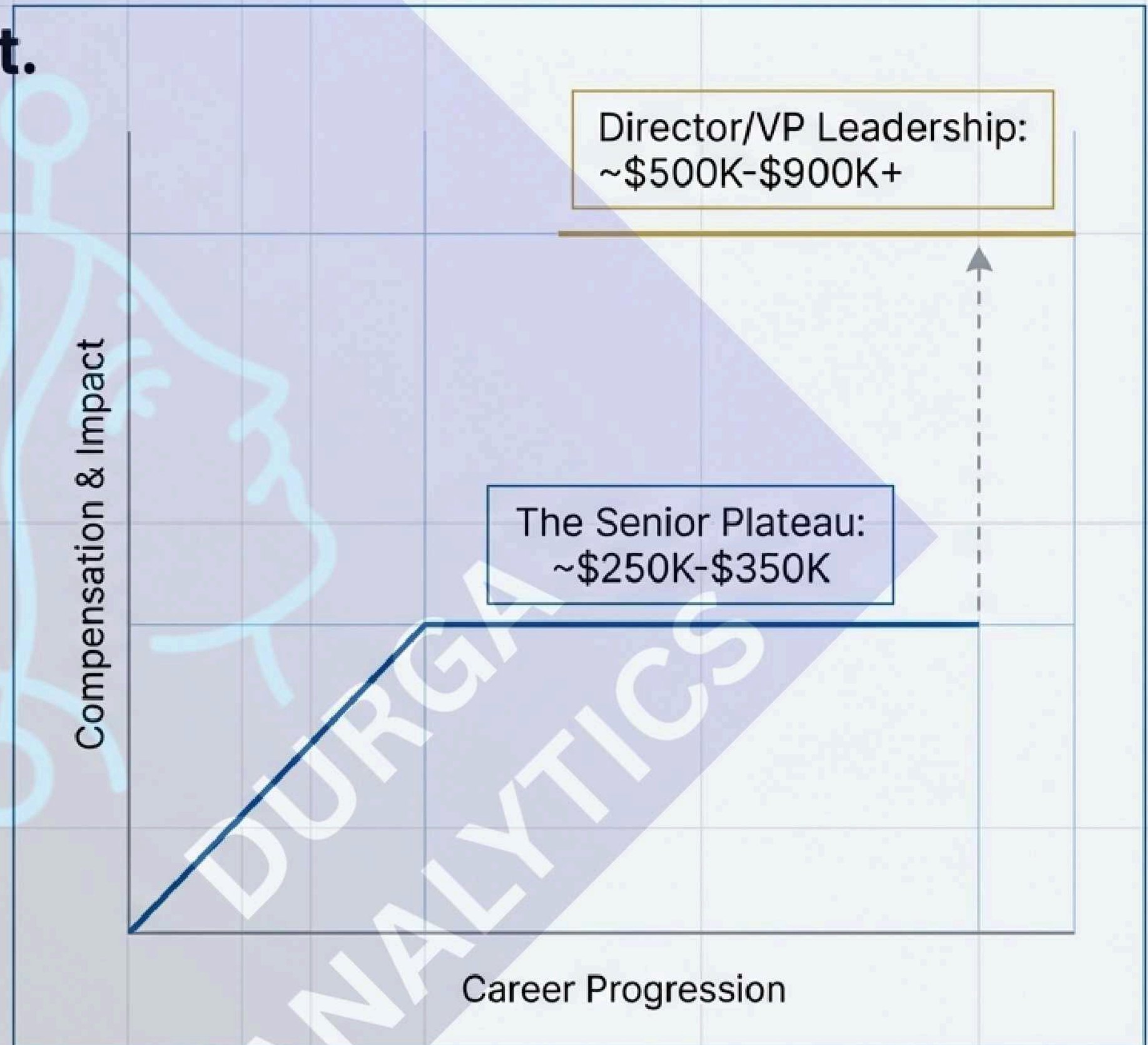


You are a top 5% technologist. Why has your career trajectory plateaued?

You've mastered Python, architected complex data pipelines, and delivered critical projects. You are an expert in your domain.

Yet, the leap from Senior Contributor to Director or VP remains elusive. Your compensation has hit a ceiling, and the most strategic, high-impact roles seem just out of reach.

The reality: The skills that made you an elite senior practitioner are insufficient for the next level.



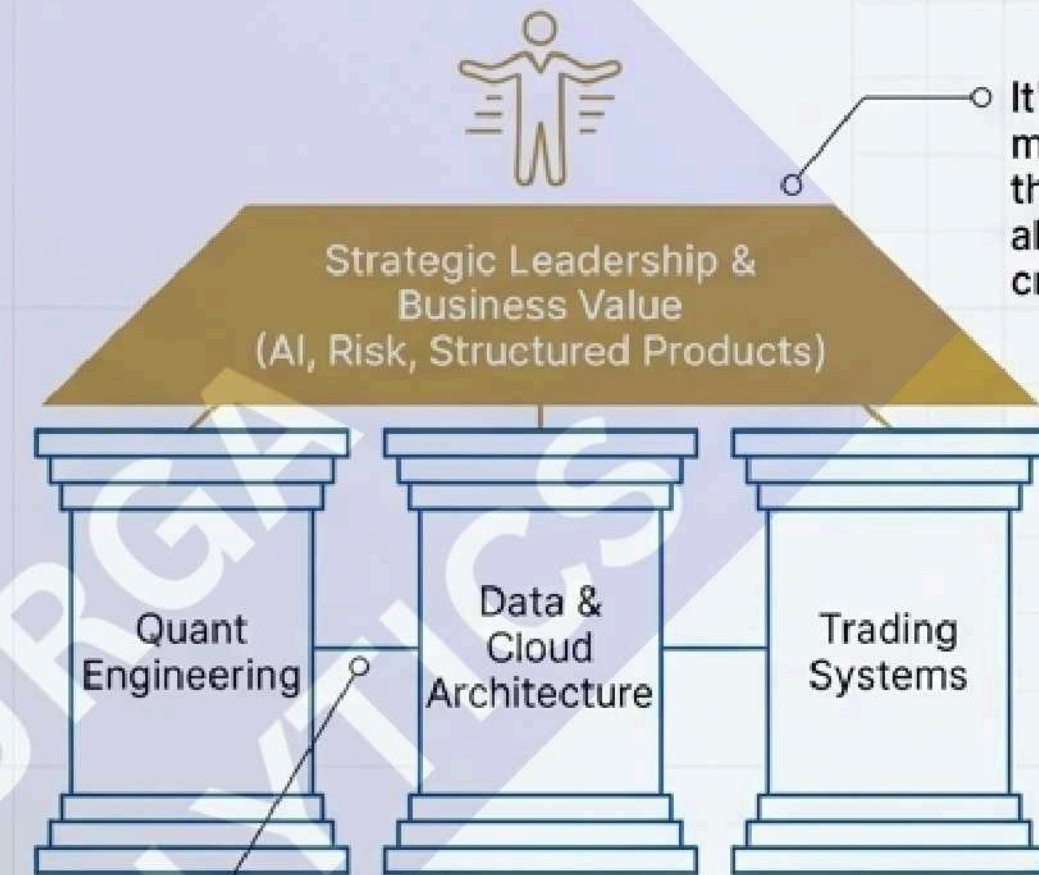
The Director-Level Competency Gap: From Siloed Expert to Multi-Domain Architect

Senior Practitioner



The Transition

Director/VP Architect



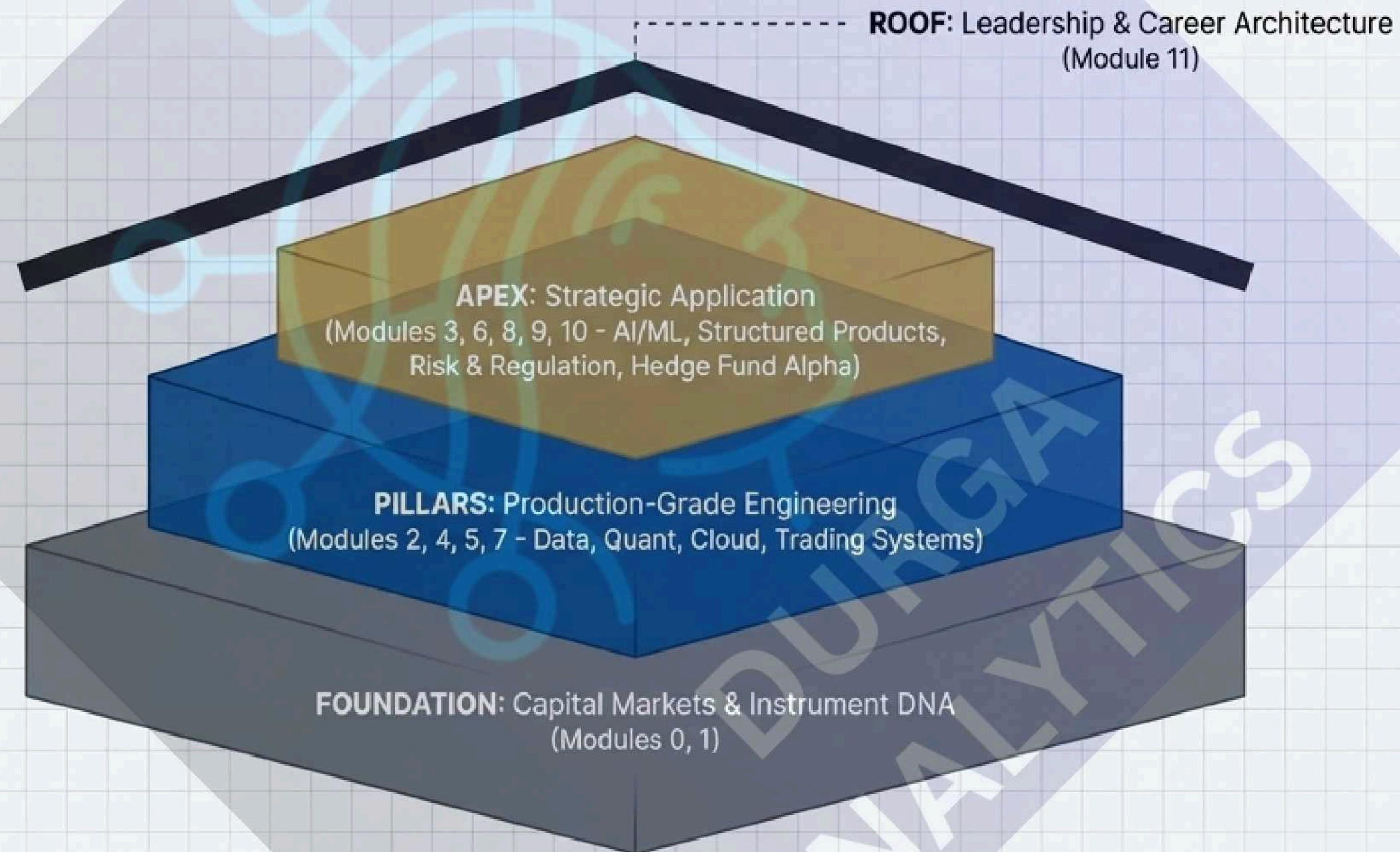
It's not just running ML models; it's deploying them for surveillance, alpha generation, and credit loss forecasting.

It's no longer enough to build a pricing model; you must architect the entire FO-to-Risk data pipeline.

It's not just knowing cloud; it's designing bank-grade, regulated data platforms on Databricks and Snowflake.

The Solution: An End-to-End Blueprint for a \$900K+ Career

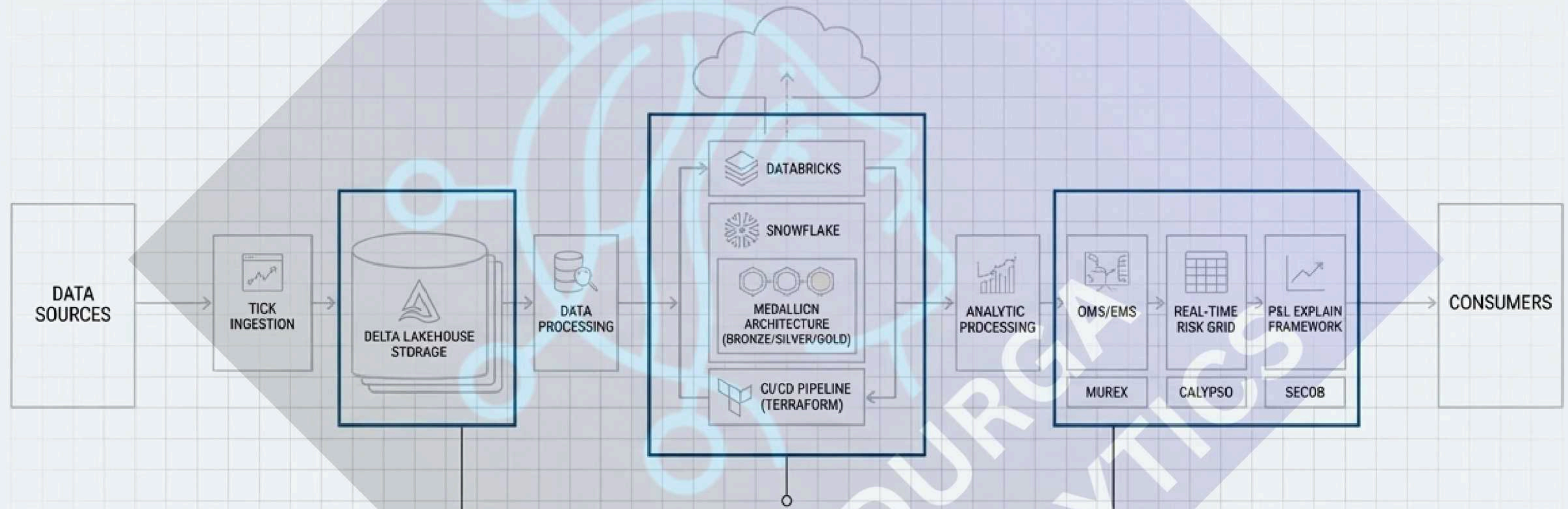
This program was designed to systematically close the competency gap. It is not a collection of tutorials; it is an integrated, **bank-grade** curriculum that builds the complete skillset required of a Capital Markets Director.



We provide the proof, you build the portfolio.

Deep Dive: The Engineering Core — Building Bank-Grade Platforms

You will move beyond scripts and applications to architecting the nervous system of a modern financial institution.



Capital Markets Data Architecture (Module 2)

Engineer a high-throughput tick capture pipeline. Architect a market data golden source and a trading lakehouse using Delta Lake.

Cloud & Data Engineering (Module 7)

Implement Medallion Architecture on Databricks. Design Snowflake data models for pricing, curves, and risk. Build bank-grade CI/CD pipelines for quant code using Terraform.

Trading Systems Architecture (Module 5)

Design the full front-to-back trade lifecycle. You will build blueprints for OMS/EMS, real-time risk grids, and P&L explain frameworks, drawing on concepts from Murex, Calypso, and SecDB.

Deep Dive: The Quant & Alpha Layer — Mastering Price, Risk, and AI

Go beyond using libraries. You will build the pricing and modeling engines that drive profitability and manage risk.

Pricing, Curves & Time-Series (Module 3):

You will build a full multi-curve framework from scratch for SOFR/ESTR, construct arbitrage-free volatility surfaces using SABR and SVI, and bootstrap credit curves from CDS spreads.

AI/ML for Capital Markets (Module 8):

You will deploy Transformer models for time-series forecasting, build an LLM-powered trading research assistant, and engineer ML models for trade surveillance (spoofing, layering).

Hedge Fund Pipeline (Module 10):

You will build a complete end-to-end system: from tick data ingestion and feature engineering to a multi-asset backtester with transaction cost modeling and portfolio optimization.



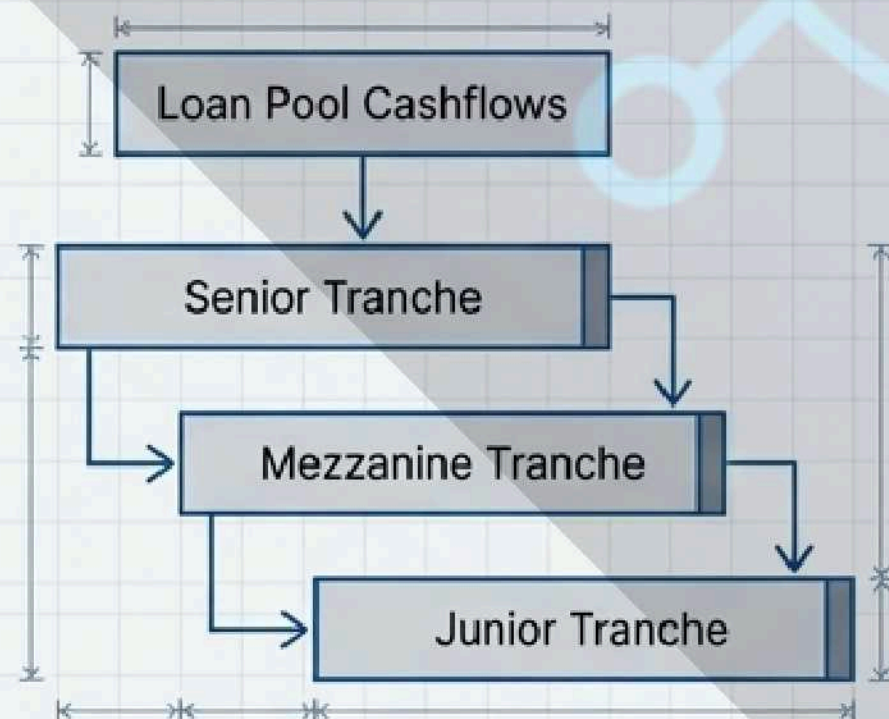
Deep Dive: The High-Value Domains That Command Premium Compensation

Master the complex, regulated products where deep domain expertise creates immense value.

ABS / Structured Products Modeling (Module 6)

This is one of the highest-paying, most underserved domains in quant finance.

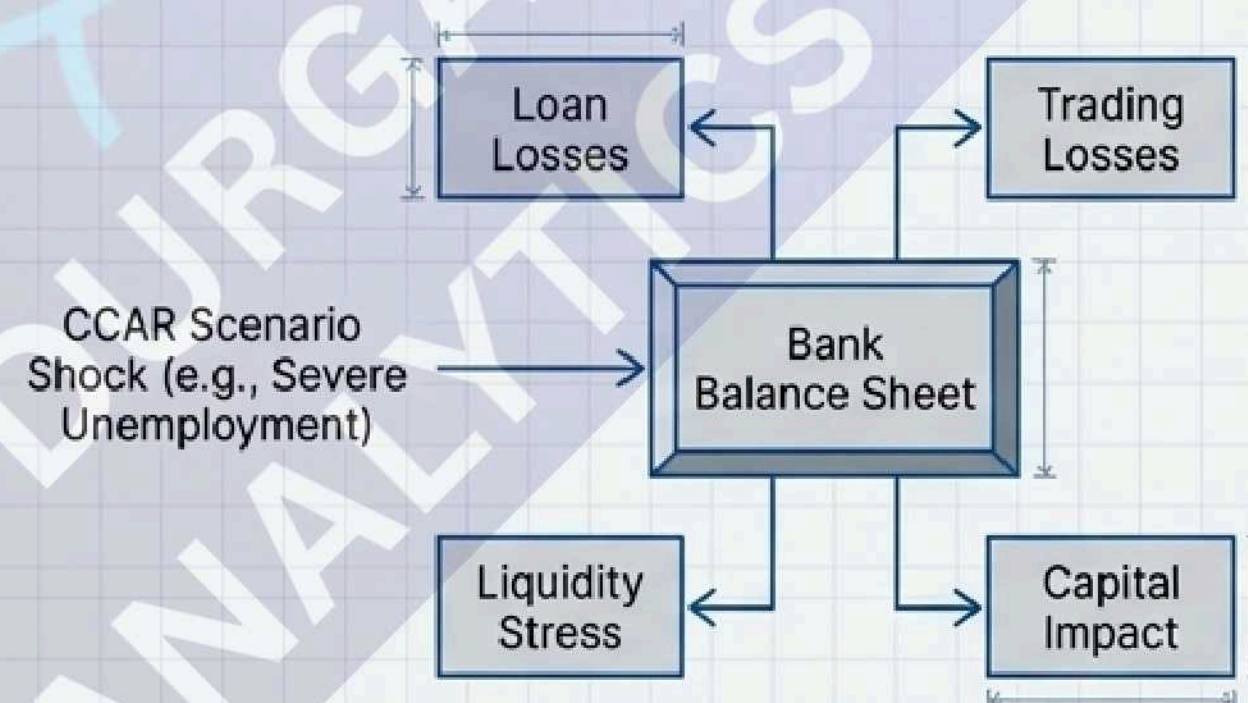
Proof Point: You will not just learn the theory. **You will build a complete ABS Waterfall & Stress Testing Platform**, engineering loan-level data models, prepayment/loss curves, and priority-of-payment engines for multi-tranche deals.



Risk, Regulation & Compliance (Module 9)

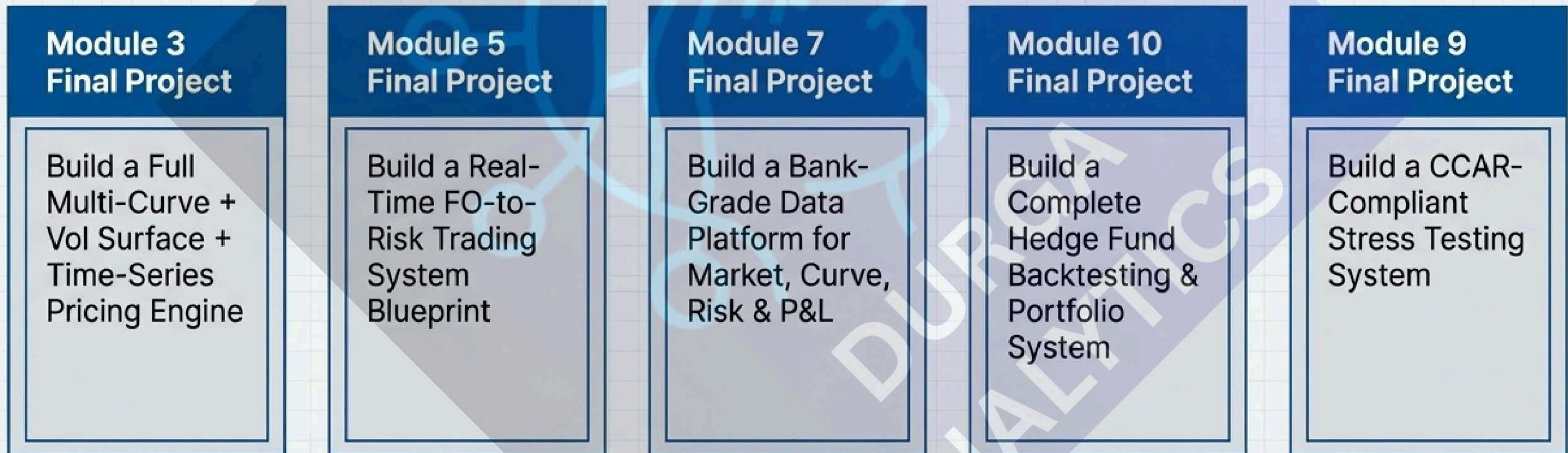
Speak the language of the CRO and the regulators.

Proof Point: You will engineer systems for the modern banking book. **You will build a CCAR-Compliant Stress Testing System** and implement key components of FRTB, including Risk Factor Eligibility Tests (RFET) and Default Risk Charge (DRC) models.



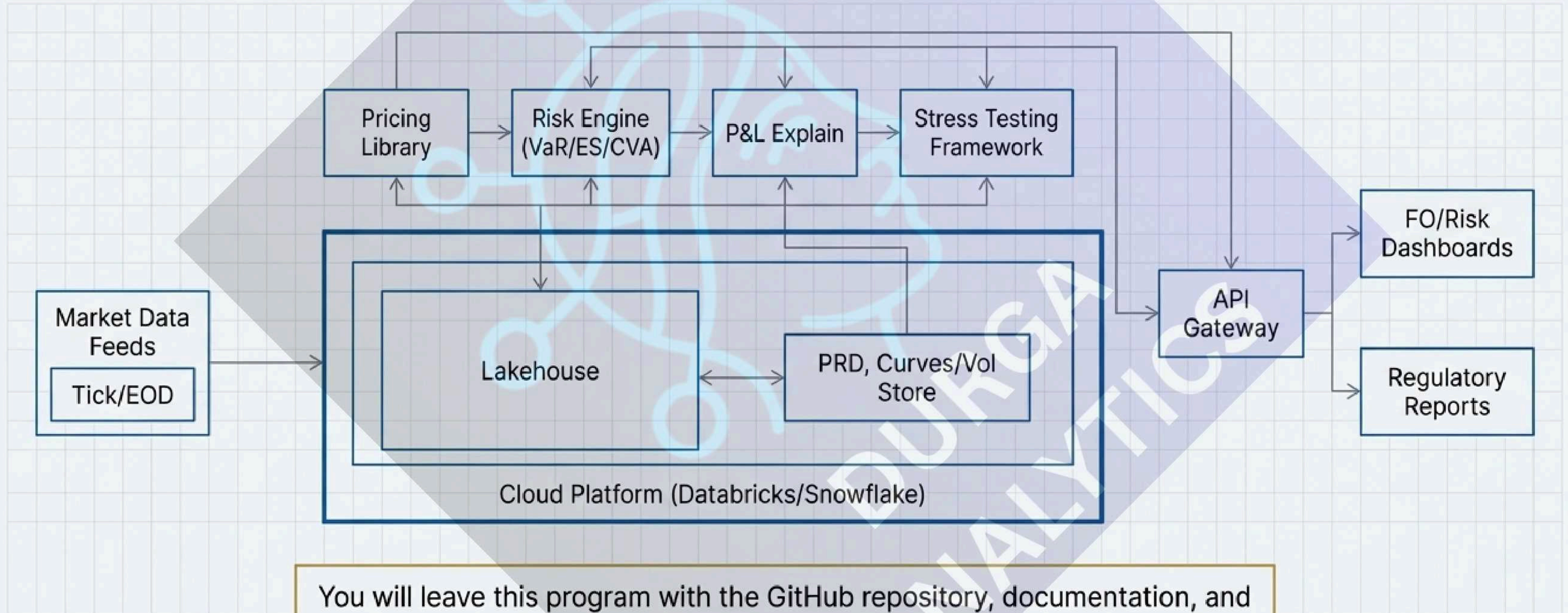
From Theory to Production: Your Portfolio of Bank-Grade Projects

Every module culminates in a final project designed to be a centerpiece of your professional portfolio. These are not academic exercises; they are comprehensive system builds that demonstrate Director-level capability.



The Capstone Project: Your Director-Level Architectural Showcase

The final module is not a course; it is a guided build of a complete, enterprise-grade capital markets platform. This project integrates every core competency from the program into a single, cohesive system—the ultimate proof point for any hiring manager.



You will leave this program with the GitHub repository, documentation, and architectural deck for a system that would take a bank team years to build.

Beyond the Code: The Career Architecture Module

Technical excellence alone does not secure a Director role. Module 11 is a dedicated accelerator focused on the communication, strategic thinking, and leadership skills required to operate at the highest levels.

Executive Communication

- Communicating Architecture to MDs & CIOs
- Structuring Complex Explanations (XVA, ABS Waterfalls)
- Running Whiteboard Architecture Sessions

Strategic Positioning

- Writing "Impact Heavy" Resume Bullets for \$900K Roles
- Building Your Director-Level "Narrative Stack"
- Packaging Your Capstone as a "Bank-Grade Platform" Case Study

Interview Mastery

- Director-Level Architectural Interview Patterns
- Full Multi-Round Panel Simulation (CTO, CRO, PM)
- Director-Level Compensation Negotiation Framework

The Complete Curriculum Blueprint: 12 Modules, 650 Chapters

<p>🎯 MODULE 0 — FOUNDATIONS Master global markets, instruments, and the core Python/SQL skills for finance.</p>	<p>🎯 MODULE 6 — ABS/ABF/STRUCTURED PRODUCTS MODELING Build institutional-grade cashflow and stress testing engines for the highest-paying domain in quant finance.</p>
<p>🎯 MODULE 1 — FINANCIAL INSTRUMENTS DEEP DIVE Engineer data models for complex derivatives, curves, and structured products.</p>	<p>🎯 MODULE 7 — CLOUD & DATA ENGINEERING Implement regulated, high-performance data platforms on Databricks and Snowflake.</p>
<p>🎯 MODULE 2 — CAPITAL MARKETS DATA ARCHITECTURE Architect bank-grade data pipelines, lakehouses, and golden sources.</p>	<p>🎯 MODULE 8 — AI/ML FOR CAPITAL MARKETS Deploy ML for alpha generation, risk management, trade surveillance, and LLM-powered research.</p>
<p>🎯 MODULE 3 — PRICING, CURVES & TIME-SERIES Build the core quant engines for pricing, volatility surfaces, and forecasting.</p>	<p>🎯 MODULE 9 — RISK, REGULATION & COMPLIANCE Engineer systems for FRTB, CCAR, and CVA, speaking the language of the CRO.</p>
<p>🎯 MODULE 4 — QUANT ENGINEERING & PYTHON Develop production-grade quant libraries, simulation engines, and risk frameworks.</p>	<p>🎯 MODULE 10 — FULL HEDGE FUND PIPELINE BUILD Construct an end-to-end system from data ingestion and alpha signals to backtesting and portfolio optimization.</p>
<p>🎯 MODULE 5 — TRADING SYSTEMS & ARCHITECTURE Design the full front-to-back trade lifecycle, from OMS/EMS to risk and settlement.</p>	<p>🎯 MODULE 11 — THE \$900K CAREER ACCELERATOR Master executive communication, architectural storytelling, and director-level interview patterns.</p>

Capstone Project (Module 12): A culminating build of an enterprise-grade Data + Pricing + Risk Platform.

Is This Program Engineered For You?

This program is designed for experienced professionals ready to make a significant career leap. It is not for beginners.



Role: Senior Software Engineer, Quant Analyst/Developer, Data Scientist, or Data Engineer in finance.



Experience: 5+ years of professional experience, with a strong track record of project delivery.



Technical Skill: High proficiency in Python and SQL. Experience with data-intensive systems.



Ambition: A clear goal to transition from a senior individual contributor to a strategic leadership role (Architect, Director, VP) within 12-24 months.



Mindset: You see education as a high-ROI investment in your career architecture, not an expense.

Architect Your Future: Enrollment & Next Steps

Base Program

\$2,500

Premium Tier

\$3,500

VIP Mentorship

\$4,999


An investment designed to generate a 100-200x return by unlocking access to **\$500K-\$900K+** roles. The curriculum covers content that is simply not taught anywhere else, combining **quant finance, bank-grade data engineering, AI, and career architecture.**

Seats are limited to ensure cohort quality.

www.durgaanalytics.com/cap_data_ai

Apply for an enrollment consultation to discuss your career goals and program fit.

Download the complete 650-chapter syllabus.  +91 9560116736

 contact@durgaanalytics.com

