CFA Society Philippines

# MASTERCLASS

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# Financial Analytics for Investment Professionals

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# Masterclass: Financial Analytics for Investment Professionals

## Details

### Registration Details (VAT Inclusive)

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| CFA Members | : Php 14,499.00 |
| Faculty/Sponsors | : Php 14,499.00 |
| Early Bird Rate | : Php 17,999.00 (until September 26, 2025) |
| Regular Rate | : Php 19,999.00 |
| Deadline of Registration | : October 31, 2025 |
| Registration Link | : https://bit.ly/masterclassinfinancialanalytics2025 |
| Date | : November 11 and 18, 2025 |
| Time | : 9:00am - 5:00pm |
| Venue | : Ortigas (TBA) |

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### Contact Persons

**Registration**

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**Billing and Payment**

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## About the Speaker

**Mr. Francis Adrian Viernes, CFA**
Assistant Vice President and
Head of Data Analytics
Megaworld Corporation

Our speaker is a seasoned professional with extensive experience in data analytics, real estate, and finance. Currently serving as the Assistant Vice President and Head of Data Analytics at Megaworld Corporation, he also holds key leadership roles as the Chief Data and Tokenomics Officer and Board Member at Likha Creatives Inc.

Previously, he served as the Chief Analytics Officer and Chief Data Scientist at Advance Tech Lending, Associate Director at Leechiu Property Consultants, and Head of Research and Consulting at Cushman and Wakefield.

A CFA Charterholder, he passed all CFA exams on his first attempt and holds an Executive Diploma in Real Estate Management as a Certified CREBA Real Estate Professional (CCREP). His accomplishments include being named Most Outstanding Faculty at DLSU Financial Management (AY 2020 - 2021) and being a candidate for Most Promising CFA Charterholder 2021 by the CFA Society Philippines.

In addition to his professional achievements, he has taught Data Science, Finance, and Economics in three of the Big 4 schools in Manila: Ateneo de Manila University, University of Santo Tomas, and De La Salle University.

He has also represented the Philippines on the global stage, delivering talks and presenting papers at international conferences held in Singapore, Malaysia, and Taiwan.

Furthermore, he has been recognized as one of the Top 100 Filipinos on LinkedIn for Learning and Inspiration for both 2023 and 2024. He is also a recognized global data science author, contributing to publications like Towards Data Science and Data Driven Investor.

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## Overview

Financial analytics has become a crucial component of modern investment decision-making. With over 5,000 financial analyst positions currently available in the Philippines as of February 2025, including many in Metro Manila, there is a significant demand for professionals skilled in financial data analysis, strategy, and risk assessment. This masterclass is designed to equip investment professionals with advanced analytical techniques, including financial optimization, machine learning, and time series forecasting, to enhance portfolio management, risk analysis, and investment strategy development.

## Why Take This Masterclass?

Investment professionals today need more than traditional finance knowledge—they must be proficient in data-driven decision-making to remain competitive. This masterclass provides:

- **Practical Applications:** Hands-on case studies tailored for investment analysis and portfolio management.
- **Cutting-Edge Techniques:** Exposure to machine learning, financial optimization, and predictive analytics.
- **Industry Relevance:** Direct applicability to roles such as investment analysts, portfolio managers, risk analysts, and financial planners.

## Target Audience

This masterclass is designed for:

- Investment professionals looking to integrate analytics into their decision-making process.
- Portfolio managers seeking data-driven approaches to asset allocation.
- Risk analysts and financial planners interested in predictive modeling.
- Financial analysts aiming to enhance their quantitative skills.
- Graduate students and young professionals pursuing careers in investment analysis.

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# Masterclass: Financial Analytics for Investment Professionals

## Module 1: Python for Portfolio Management

This foundation module provides learners with the basic Python programming fundamentals specific to financial analytics. For participants with no or minimal coding experience, this practical week offers a solid foundation in data structures, loops, functions, and handling financial data using standard libraries such as Pandas and NumPy.

**Topics Covered**

- Why Financial Analytics?
- Python Basics
- Jupyter Notebook or Google Colab
- Working with pandas, numpy for financial data

## Module 2: Portfolio Diagnostics using Market Data and Beta Analysis

This module presents the application of real-time financial information for evaluating asset performance as well as market risk exposure. Participants will be able to import and preprocess datasets from the PSE, Yahoo Finance, crypto exchanges, as well as forex platforms. Through linear regression, participants will compute Beta as a crucial portfolio risk statistic, its implications, and correlate this with market models like CAPM to inform allocation decisions.

**Topics Covered**

- Accessing market data (PSEi, Yahoo Finance, Crypto, Forex APIs)
- Return calculation: simple and log returns
- Linear regression to compute asset Beta
- Interpreting Alpha and residual risk
- Applying Beta in portfolio design and diversification

## Module 3: Bond Portfolio Allocation Using Linear Optimization

Building on fixed income investments, this module provides the theory of optimization to construct a bond portfolio. By applying the Simplex Method to solve constrained problems, such as maximizing returns within capital constraints or minimizing risk with a target duration, participants will be able to develop practical solutions.

### Topics Covered

- Principles of linear optimization in finance
- Using the Simplex Method in bond allocation
- Calculating bond metrics: YTM, PV, Duration, Convexity
- Hands-on case: Bond Asset-Liability Matching
- Scenario analysis with cost and return trade-offs

## Module 4: Portfolio Optimization with Monte Carlo Simulation

This module provides an in-depth examination of stochastic methods for portfolio optimization. Students will be taught how to apply a Monte Carlo simulation to analyze thousands of asset allocations using randomly drawn weights. The efficient frontier, Sharpe ratio, and risk-return relationships will be investigated using simulation.

### Topics Covered

- Portfolio theory: risk-return tradeoffs and Sharpe ratio
- Randomized portfolio weights and constraints
- Monte Carlo simulation in asset allocation
- Visualization of portfolio space and efficient frontier
- Identifying optimal portfolios through simulation

## Module 5: Presenting Financial Insights with Dashboards

In the last module, learners will create interactive and visually appealing financial dashboards. The focus will be on utilizing matplotlib, seaborn, and plotly to break down multi-layered data storytelling. The course will conclude with a capstone project, in which learners apply all their learning—from data extraction and modeling to optimization and visualization—to create an integrated financial report or dashboard.

### Topics Covered

- Advanced financial data visualization using Python
- Storytelling with data for financial decision-makers
- Dashboard tools and layout strategies
- Capstone project: portfolio analytics report with visual output
- Optional: Introduction to Streamlit for web deployment

## Key Takeaways

### Data Driven Decision-Making

This course has a particular focus on modern investment and finance professionals that aim to develop modern tools to supplement traditional finance knowledge. This course aims to instill the awareness of analytics as means of staying relevant in the industry with regards to the tools available such as open-source data and Python programming to measure risk, calculate metrics and design portfolios.

### Comprehensive Analytics Tool-kit

This course also goes beyond the simple descriptve and predictive analytics but touches on prescriptive analytics topics to complete the toolkit.

### Hands-on, Instructor-led

Modules are designed with practical, simple case studies that can be scaled through practice with an instructor providing guidance on the technical portions. Participants receive step-by-step instruction on Python basics before tackling advanced topics, making it suitable even for those with minimal coding experience.

## General Refund, Substitution, and Cancellation Policy

1. Interested parties shall register online through the CFA Society Philippines Registration link provided.

2. Upon registration, payment details will be provided through the issuance of a billing statement. The billing statement specifies the amount, whether discounted or full based on certain parameters, to be paid. Payment is required upon receipt of billing statement or the date specified in the billing statement, whichever is later.

3. Registration is only confirmed upon receipt of full payment.

4. After completing the registration and payment process, confirmation will be sent via email.

5. Registration can be transferred to another person if requested in writing by e-mail to event@cfaphilippines.org by the original registrant at least two weeks before the event. No substitution is allowed within the immediately preceding two weeks before the event.

6. All refunds are subject to an administrative fee of Php500.00. If cancelled up to four (4) weeks before the event, 100% of the registration less the administrative fee will be refunded. If cancelled between four weeks and two weeks before the event, 50% of the registration fee less the administrative fee will be refunded.

7. No refund is given if cancellation is made within two weeks prior to the event.

8. For events that require online access to a platform where content will be delivered, no refund or substitution is allowed once access to the platform has been provided.