

Advanced Data Analytics for Real Estate Financial Modelling

ONLINE PROGRAMME

Bridging the Academic and Professional World



Welcome to the Advanced Data Analytics for Real Estate Financial Modelling Course

"At Bayfield we created this course to help real estate professionals unlock the power of Python and AI in Excel-based financial models. Participants gain advanced data analytics skills to enhance DCF models, generate deeper insights, and make more informed investment decisions—giving them a clear competitive edge in real estate finance"

– Sonia Martin-Gutierrez, CEO of Bayfield Training

Transform your Excel financial models into powerful tools for commercial real estate analysis with advanced data analytics.

This course equips real estate finance professionals with advanced data analytics techniques to enhance Excel-based discounted cash flow (DCF) models for commercial real estate.

Details:

-  **4-6 Hours** per module (recommended)
-  **Cohort:** £2,500 + VAT
-  **On-Demand:** £3,000 + VAT



Learn, absorb, and apply advanced real estate modelling techniques using Excel, Python and AI—step by step, at a pace that works for you.

Through a structured, modular approach, participants will gain a smooth learning experience with engaging video lessons, step-by-step guides, quizzes, and exercises. They will learn how to seamlessly integrate Python and generative AI to generate more accurate inputs, uncover deeper insights, and ultimately improve real estate investment decision-making.

On this course, you will...

- Understand the role of data analytics in commercial real estate and how it improves financial decision-making
- Identify and work with different types of data to build more accurate financial models
- Integrate Python and Excel to enhance sensitivity analysis and leverage Dynamic Scenario Modelling alongside Monte Carlo Simulation to complement traditional Excel based analysis.
- Leverage AI tools to generate and refine financial assumptions for real estate investment models.
- Apply AI-powered tools for market research, sentiment analysis, and automated report generation.
- Complete a hands-on capstone project incorporating Python and AI into a real estate financial model, demonstrating practical expertise.

Course Agenda

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Module 1: Introduction to Real Estate Data Analytics

- Introduction
- Defining Real Estate Analytics
- Real Estate Data & Applications
- The Real Estate Analytics Spectrum
- The Value Add of Real Estate Analytics to Financial Modelling and Decision-Making
- Analytics in Practice: AI Tools & Software

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Module 2: Introduction to Python – Practical Applications for Real Estate

- Introduction
- Why Python?
- Environment Setup: Choosing Between Anaconda & Google Colab
- Essential Python Libraries for Real Estate Analytics: Pandas, NumPy, SciPy, Scikit-Learn, Statsmodels, Seaborn & Matplotlib, GeoPandas
- Comparison of analysis for each library in Python and Excel

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Module 3: Enhancing Real Estate Financial Modelling with Python

- Introduction
- Integrate Python with Excel using xlwings
- Sensitivity Analysis in Excel Using Python
- Dynamic Scenario Analysis in Excel using Python
- Building a Python-Based Monte Carlo Simulation in Excel

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Module 4: AI-Powered Analytics & Prompt Engineering for Real Estate

- Introduction
- Recap: AI in Real Estate
- Fine-Tuning and Best Practice for AI-Assisted Assumption Generation
- AI-Powered Market Research
- AI-Driven Sentiment Analysis
- AI-Assisted Report Generation & Report Summaries
- How can we use these insights to Enhance Excel Model Valuation Accuracy

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Module 5: AI-Enhanced Assumption Generation & Integration for REFM

- Introduction
- Key Real Estate Model Inputs and Assumptions
- Using AI to Generate Robust Financial Assumptions for Excel Model Inputs
- Using AI & Python for enhanced Sensitivity Analysis & Scenario Modelling
- Enhancing Lease Renewal & Vacancy Rate Forecasts with AI
- AI-Powered Benchmarking: Comparing Assets to Market Data

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Module 6: Capstone Real Estate Financial Modelling Project: Excel, Python & AI

Final Project Deliverable:

In this project, participants will apply all they have learnt in Modules 1-5:

- Apply Python & AI to enhance an advanced Excel-based real estate financial model and efficiently produce AI Assisted real estate analyst reports

How is the Course Structured?

Five modules and a Capstone Project

Each module requires 4-6 hours of study

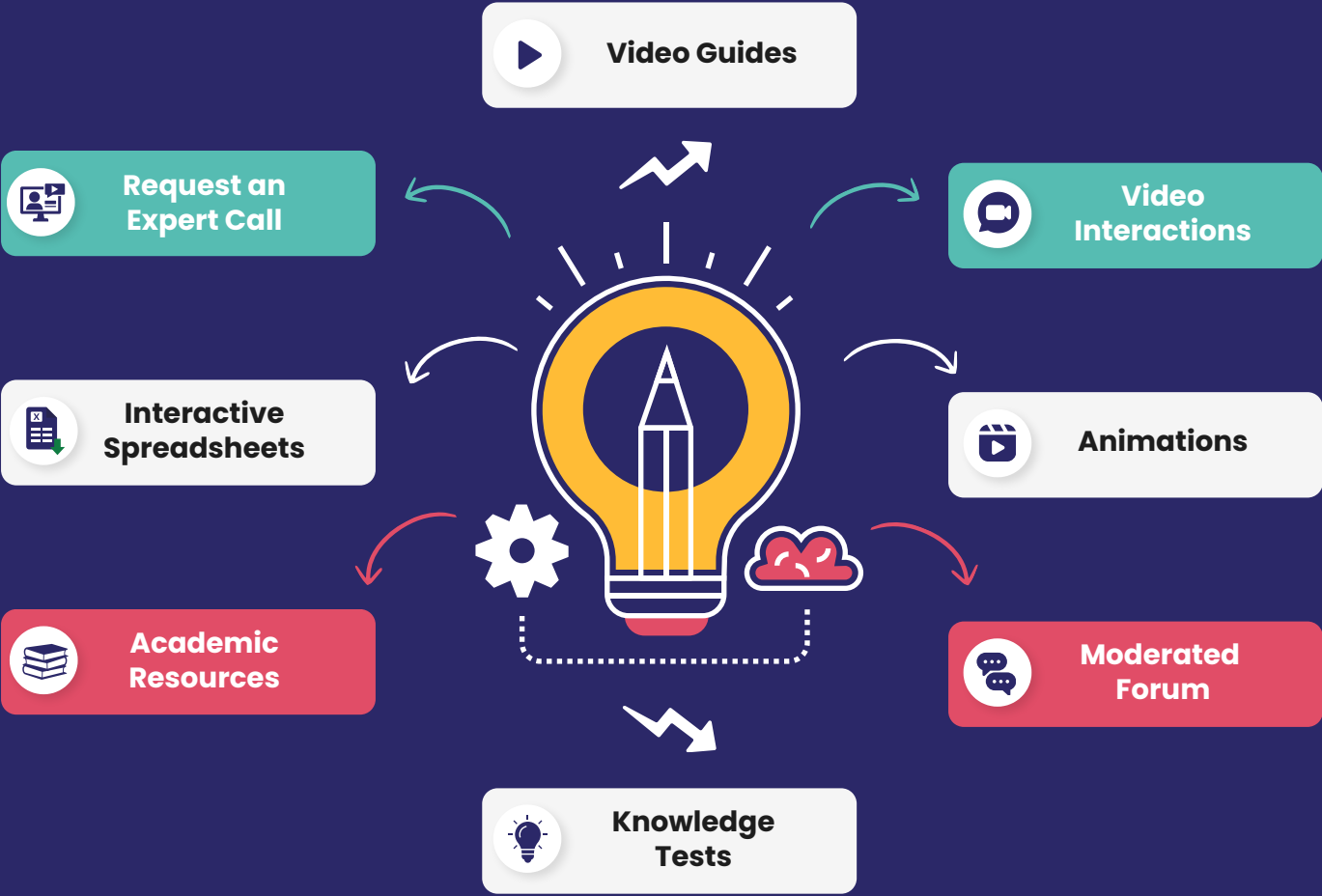
Get to know your classmates by joining the conversation in the community forum

Support from the Bayfield team throughout the course

On-demand access – learn at your own pace

Cohort learners get one month of post-course access. On-demand learners get 12 months

To test your development throughout the course, each module includes knowledge quizzes, a moderated forum and exercises.



Meet the Team



Sonia Martin-Gutierrez | Chief Executive Officer (CEO)

Sonia is the CEO of Bayfield, the leading international resource for executive education in investment-grade real estate. With extensive experience in course development and innovative programme design, she is dedicated to enhancing the careers of real estate professionals.

She is fully involved in the courses from inception to delivery and plays a hands-on role in guiding students throughout their learning journey.



Donald Stevens | Head of Research & Innovation

Donald is our new Head of Research and Innovation at Bayfield. He holds a PhD in Finance from the University of Cambridge, complemented by master's degrees in Real Estate Finance and Economic and Management Sciences, bringing unparalleled expertise to the executive education sector.

Donald later ventured into asset management, serving as a director at a boutique firm specialising in equity research, portfolio management, and advisory, before advancing to an executive director role within the Portfolio Management Group at Goldman Sachs.



Jacob Noble | Chief Operating Officer (COO)

Jacob Noble is the COO of Bayfield Training, a leading real estate and finance training provider. Since joining in 2012 as a Marketing & Communications Apprentice, he has advanced through various roles, becoming a Director in 2017 and now COO. Known for his dedication and expertise, Jacob ensures clients receive top-tier training, earning trust among clients and colleagues.



Emma Wilson | Education Services & Marketing Executive

Emma is the Education Services and Marketing Executive at Bayfield Training, managing daily course operations and supporting students throughout their learning journey. She also leads the company's marketing and design output. Emma holds a First-Class Honours degree in Events Management, where she developed strong skills in events, marketing, and creative communication.



Savina Ivanova | Digital Media & Marketing Assistant

Savina is a Digital Media and Marketing Assistant at Bayfield Training, where she plays a key role in supporting the marketing team. Her work includes creating engaging visuals and graphics, editing video content, and contributing to the overall creative direction of Bayfield's digital presence. Alongside her role, Savina is studying Digital Media Production at Anglia Ruskin University.

Certificate

On completion of all modules and submission of the capstone project you will receive 35 CPD Hours and a CPD accredited Advanced Data Analytics for Real Estate Financial Modelling Certificate.



Completion of all five modules and the capstone project is required to earn a certificate.

Upon completing the course, you will receive a CPD accreditation and a digital Platinum Financial Modelling badge to display on your LinkedIn profile. You will also become a valued and lifelong member of the Bayfield community.



Programme Alumni | Benefits

Should you wish to further enhance your Real Estate Financial Modelling skills after the course, you are entitled to exclusive offers like the below all thanks to your addition to the Real Estate Financial Modelling Programme Alumni.

- ❖ **1-Year Subscription** to the course content Cohort Students £400 + VAT
- ❖ Any Real Estate Financial Modelling **course manual** £250+VAT
- ❖ **25% off** any Real Estate Financial Modelling and Strategy Course

Bayfield Training

Bridging the Academic to Professional gap in Real Estate

Founded in 1998, Bayfield Training is a global leader in investment grade real estate education. For over 25 years, Bayfield has bridged the gap between academic knowledge and practical expertise, becoming the benchmark for real estate financial modelling training trusted by industry leaders.



Course Registration

If you would like to sign up to our next Cohort or On-Demand Advanced Data Analytics for Real Estate Financial Modelling course please follow the **registration process** detailed below.

**COHORT TWO:**
16th February – 1st April 2026

**ON-DEMAND:**
Available after purchase

**STEP ONE:**

Explore the details in this brochure, or enquire about our other course brochures to identify a course you are interested in.

**STEP TWO:**

Get in touch with us by email or phone for expert advice, further information, or assistance with any questions.

**STEP THREE:**

A Bayfield Advisor is ready to assist you in securing a place on the course you wish to attend.

For more information contact us:

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