

# Course Introduction

# Welcome

- ▶ **Financial Technology and Data Science**



- ▶ **Professor Barry Quinn**
- ▶ **Ulster University Business School**

# Who I Am

- ▶ Professor of Finance and Financial Technology, Ulster University Business School
- ▶ Background: applied econometrics and financial markets; interested in how AI/ML are reshaping finance
- ▶ Prior industry: currency trading and liquidity management
- ▶ Teaches: quantitative finance, econometrics, and data science for finance
- ▶ Focus:
  - ▶ Applied econometrics + ML for finance (forecasting, anomaly detection)
  - ▶ Portfolio optimisation and risk
  - ▶ Digital finance adoption/infrastructure and regulation

## Who I Am

- ▶ Emphasis: ethical data use, reproducibility, and building confidence, curiosity, and resilience
- ▶ Software: tsfe (Time Series Econometrics), fml (Financial ML)
- ▶ Recent work: IEEE Internet of Things Journal (2025); IEEE TEC (2024)
- ▶ Professional: Chartered Statistician (RSS); Advanced Data Science Professional (Alliance for Data Science Professionals)
- ▶ Office hours: weekly (see course site) · Email: [b.quinn1@ulster.ac.uk](mailto:b.quinn1@ulster.ac.uk)

## Course at a Glance

- ▶ 12-week arc organised around a textbook-style core (chapters + labs + slides)
- ▶ Hands-on labs each week with “Open in Colab” notebooks
- ▶ Chapters provide context; slides preview; labs build skills
- ▶ See: Weekly Schedule on the site

# Assessments

- ▶ Assessment details (briefs, dates, rubrics) are module-specific.
- ▶ Use the module page on the site for the authoritative current assessment information.

## How We Work

- ▶ Student workflow (Jupyter/Colab): run notebooks, tweak parameters, explain results
- ▶ Publishing workflow (Quarto): course chapters + slides for reproducible reference
- ▶ Pinned environments; deterministic seeds; evidence-based claims

## Expectations : From You

- ▶ Prepare weekly: skim chapter, open notebook, run top-to-bottom
- ▶ Practise actively: modify code, document what changed and why
- ▶ Ask early: use office hours and seminars
- ▶ Academic integrity: cite sources and be transparent about methods

## Expectations : From Me

- ▶ Clear structure, runnable examples, and timely feedback
- ▶ Transparent rubrics and realistic, assessment-aligned tasks
- ▶ Support in seminars/clinics and office hours
- ▶ Professional standards with approachable delivery

# Resources

- ▶ Students → Student Guide; Getting Started (Colab/Codespaces)
- ▶ Labs → Colab badges for one-click notebooks
- ▶ Slides → Decks for each week
- ▶ Schedule → Week-by-week topics and checkpoints

## Contact

- ▶ Email: [b.quinn1@ulster.ac.uk](mailto:b.quinn1@ulster.ac.uk)
- ▶ Office hours: see course site
- ▶ Course site: <https://quinfer.github.io/financial-data-science>

## Welcome Aboard

Let's build practical, evidence-based skills that transfer beyond this module.