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

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
- 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.