Learn Coding

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1 Elevator pitch

- introduce coding and Python
- focus on simple ways to develop software autonomously
- We will learn programming with Python!

- If time allows: basic Data Science methods
  - Data types and data structures
  - Conditional and loops
  - User input output
  - Text files
  - Functions
  - Data cleaning
  - Basic stats
  - Relational databases and their Structured query language (SQL)

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2 On module completion you will be able to:

- Write Python programs
- start personal projects
- Understand the basics of algorithms and coding
- Use different data sources
- Visualize data
- use the SQL language to query relational databases; set up and run simple databases

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- hands-on Python
- basic structures, iterations & functions
- List, Dictionaries, Sets and Tuples
- Numerical functions: Numpy
- Data visualisation: Matplotlib
- Data ingestion, tables and time series: Pandas

- Intro to SQL: Structured Query Language
- Creating simple SQL databases
- writing SQL queries to extract data
- embed SQL in Python
- Developing a Case Study with Python

- Class style
- **Laptops on, smartphones off**
- **Lectures and labs mix up seamlessly**
- **use the Teams channel for quick questions**

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3 instructor

- Dr Alessandro Provetti
- PhD on AI for simplifying programming languages
- Research on understanding user data in "Social web" platforms.
- Started the Birkbeck Institute for Data Analytics

office: virtual (MS Teams) mostly

email: a.provetti@bbk.ac.uk

- TA: Dr Alberto Matuozzo
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- PhD in Machine Learning for Finance at Birkbeck, UK
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- Research on mixed AI systems in Finance

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- Guest lecturer: Dr Federico Pilati
- PhD in Computational Social sciences at IULM, IT
- Post-doc at Université de Genève, CH
- Research on the emergence of online communities within digital platforms (e.g. Wikipedia, Twitter, TikTok, Twitch)

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