

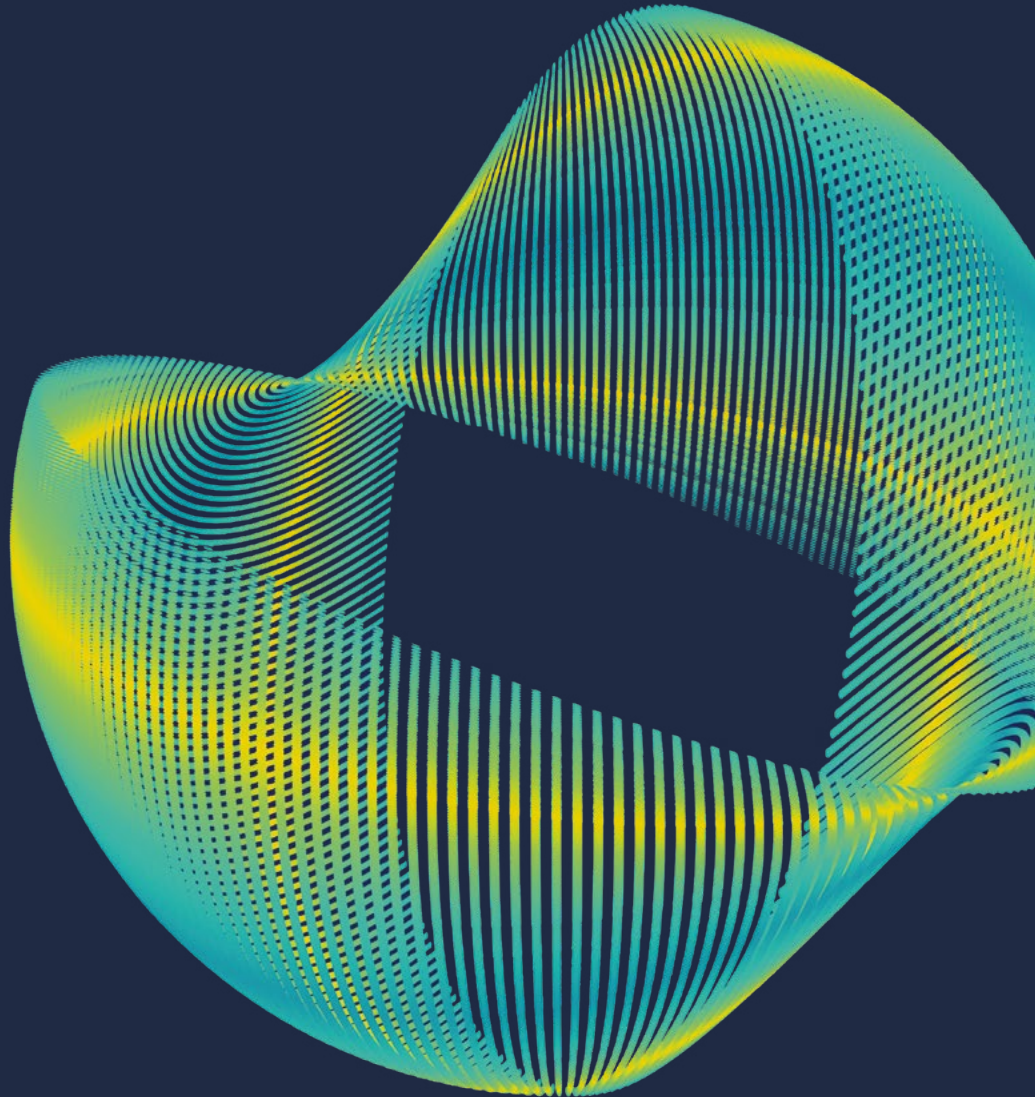
## The Imperial College and Corndel Data Analyst Programme

An introductory guide for  
prospective Learners

Create a data-driven future.  
Build your future in data.

## Introduction

The Imperial College and Corndel Data Analyst Programme equips professionals with the techniques, skills and knowledge to generate meaningful insights and make better business decisions.



### Overview

This 16-month programme (+ 2-month End Point Assessment) is designed to enable professionals across a variety of corporate functions to gain the critical knowledge, skills and behaviours needed to successfully gain business insights. Learners will be manipulating and analysing large volumes of data to inform and enhance key business decisions.

### Practical

The programme blends training workshops led by experienced data scientists, one-to-one coaching and hands-on projects to enable you to develop coding skills, build familiarity with a variety of analytical techniques and their practical application to your work.

During the programme, you will be introduced to tools and frameworks which are practical and immediately relevant to your work.

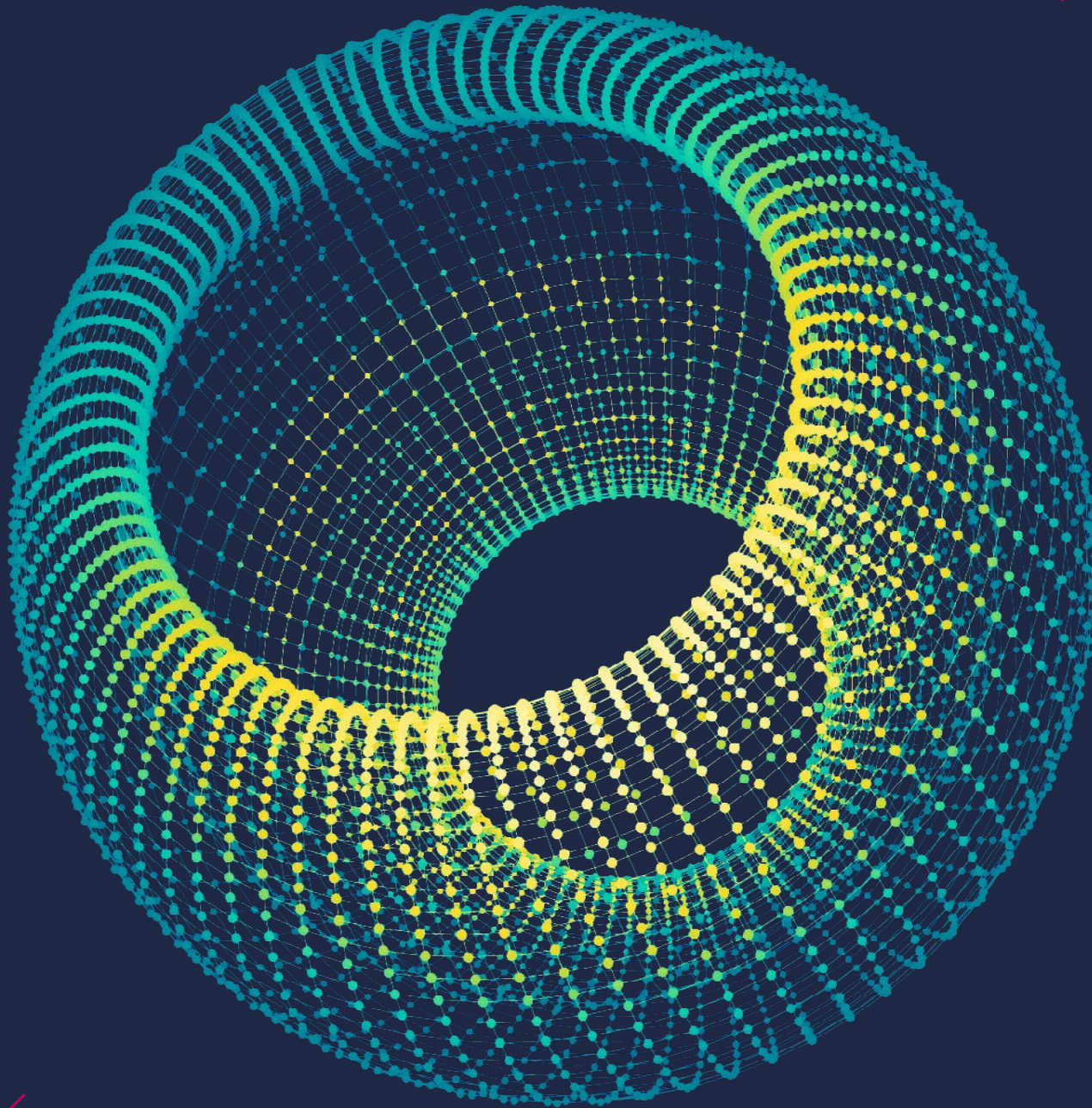
### Personal Support

Throughout the programme, you will have a personal coach, who will support you to apply the skills you are learning to your role. You will meet with them on a monthly basis.

Our coaches are experienced data professionals used to analysing and presenting information in a variety of professional contexts. They are well placed to support you to embed data analytics skills into your work.

### Professional Qualifications

Throughout the programme, you will work to achieve the Level 4 Data Analyst apprenticeship standard.



## Who is the programme for?

The Imperial College and Corndel Data Analyst Programme is for professionals whose roles increasingly require them to prepare and analyse large amounts of data and build predictive tools. These individuals are critical champions, specialists and advocates for defining what 'data-driven' means for your organisation.

## Programme features

- 16-month (+2-month End Point Assessment) blended learning delivery model
- Monthly coaching with a Professional Development Expert
- 16 hands-on workshops delivered by experienced data professionals
- Bite-sized, practical projects to embed learning
- Flexible learning content in a range of formats
- Fully funded through the Apprenticeship Levy

## Professional Impact

The Imperial College and Corndel Data Analyst Programme equips you with the techniques, skills and knowledge to generate meaningful insights from organisational data that leads to tangible business impact, including:

- Improved performance based on predictive automated insights built in-house
- Robust analysis throughout the organisation through better designed and managed analytics projects
- Increased capacity in centralised highly-skilled functions by building more widespread capability for business-as-usual data analytics tasks
- Improved safety and security when analysing organisational data



## Programme overview

The Imperial College and Corndel Data Analyst Programme will teach you powerful technical skills for analysing data which you can immediately apply to your role. Learners on this programme make more informed decisions, allocate resources more effectively, and can engage their teams through high impact analysis and insights.

The programme has 7 units covering core analytical techniques, shown on the following pages.

Key concepts and techniques will be introduced through 16 experiential workshops facilitated by Corndel's team of experienced data professionals.

You will supplement your learning through guided online study via real data analytics projects, broken down into short exercises that systematically build familiarity with coding in Python, as well as analytical techniques such as classification, clustering and regression.

These projects will form a professional portfolio that demonstrates your application of data analytics tools and techniques.

You will have monthly one-to-one coaching sessions with a professional coach to support you to apply these techniques into your day-to-day work and how they can add value to your organisation.

Throughout the course, you will have access to a purpose-built library of online learning content and reference material, to help you to transfer techniques between practice exercises and real-world projects.

## Programme Overview

Unit  
1

### Data Fundamentals

- Wonderful world of data
- Powerful projects
- Types of data
- Data quality
- Structure of data
- Analytics roadmap

Unit  
2

### Databases

- Data governance & data management
- How data is stored - structures and databases
- Working with databases
- Aggregating with SQL
- Database design
- Combining data

Unit  
3

### Data Visualisation and Business Intelligence

- Data visualisation
- Dashboards
- User experience
- Descriptive stats & Data mining
- Samples vs populations
- Statistical analysis
- BI project
- Data Ethics

Unit  
4

### Data Science

- Introduction to machine learning and data science
- Coding in Python
- Decision Trees in Python
- Decision Tress in Industry
- Adapting python code
- Low code alternatives

Unit  
5

### Advanced analytics

- Linear regression
- Building a Linear Regression Model in Python
- Implementing a linear regression model
- Linear regression in industry
- Logistic regression
- Building a logistic regression model in Python
- Implementing a logistic regression model
- Logistic regression in industry
- Clustering
- Building a clustering model in Python
- Implementing a clustering model
- Clustering in industry
- Time series forecasting
- Building a time series forecasting model in Python
- Implementing a time series forecasting model
- Time series forecasting in industry

Unit  
6

### Project management

- Building a business case
- Stakeholder Requirements
- Planning a project
- Data Architecture, Legislation and Policies
- Combining and profiling data
- Analysing data
- Communicating and reporting results
- Presentation skills I
- Presentation skills II
- Professional discussions I
- Professional discussions II

Unit  
7

### Wider world of data

- Data security, protection and privacy
- Open source
- Machine Learning
- Cloud infrastructure
- Data pipelines
- Data architecture
- Data engineering
- Linux
- Data lakes
- APIs
- Big data, hadoop and spark
- Staying at the cutting-edge



## Masterclasses and Fireside Chats from Imperial College Business School

Imperial College Business School is home to many of the world's brightest minds in the fields of data science and technology. During the programme, you will have the opportunity to attend Imperial College Masterclasses to learn more about the analytics and technologies that are increasingly impacting the modern workplace. You will take away important, valuable, and inspirational information that you can immediately use in your role, all packaged in digestible and engaging one to two-hour Masterclasses.

## Masterclasses

### Masterclass 1

#### Why you should never join an unsecured wireless hotspot and other ways to lose your data shirt

Data and information privacy, ethics and governance from Head of Computational Privacy Group, Special Adviser on AI and Data Protection to European Commission.



Prof. Yves-Alexandre de Montjoye

### Masterclass 2

#### Game-changing technologies: What's hot and what's not?

IoT, 5G, The Cloud, Big Data, Blockchain from Professor of Digital Strategy and Innovation at Imperial College Business School.



Prof. Chris Tucci

### Masterclass 3

#### Hacking on the world stage

The damage caused by hacking and the impacts on companies, governments and global security from Director of the Institute for Security, Science and Technology; co-founder of Imperial's FinTech Network of Excellence and Chair of the NATO Advisory Group on Emerging and Disruptive Technologies.



Prof. Deeph Chana

### Masterclass 4

#### Why my hoover finds crumbs: The fundamental things to know about Artificial Intelligence and Machine Learning

AI & ML fundamentals, key applications and use scenarios from Professor of Finance, President-Elect of European Finance Association.



Prof. Marcin Kacperczyk

### Masterclass 5

#### Sport, Politics and other risky business

Practical implications of ML and how data is used within betting and politics by Tech Lead at Tower Research Capital.



Pierre Dangauthier

### Masterclass 6

#### Humans & Machines – better together? The future of AI enhancing human abilities, ethics and the art of the possible

The future of human/machine interaction from Professor AI & Neuroscience and Director of the Behavioural Analytics Lab at Imperial college.



Aldo Faisal

### Masterclass 7

#### Artificial Intelligence on the frontline of the pandemic

How AI was used in the search for vaccines during the coronavirus pandemic



Sarah Filippi

### Masterclass 8

#### Using Data to Provide Actionable Impact in Healthcare

How data is being used to facilitate change, inform decisions and encourage in healthcare.



Sonali Parbhoo

## Fireside Chats

Professional discussion with Gord Graylish, General Manager EMEA at Intel and Programme Director, AI & ML in Financial Services at Imperial Journey to General Manager; the power of AI & ML in industry; future of tech industry

Professional Discussion with Mike Seville, CDO of Dojo Day in the life of a CDO; important aspects of data and data governance



## About Imperial College Business School

As part of Imperial College London, a global leader in science and technology, Imperial College Business School drives global business and social transformation through the fusion of business, technology and an entrepreneurial mindset.

Combining innovative thinking and insight with new technology to develop solutions to real world issues, benefiting business and improving society.

## About Corndel

Corndel is a multi-award-winning strategic skills development partner, delivering workplace training that can be fully funded through organisations' Apprenticeship Levy.

Corndel's disruptive focus on training brilliance, with one-to-one coaching from commercial experts at its heart, has made it the go-to partner for large employers focused on quality.



Blended, flexible delivery to fit around work schedules



Personalised one-to-one executive coaching and mentoring



Fully funded using your Apprenticeship Levy



Imperial College Business School Masterclasses & Fireside Chats



# Frequently Asked Questions

## 1. Why should I enrol on the The Imperial College and Corndel Data Analyst Programme?

The programme is designed to ensure you develop the skills to effectively apply advanced analytical techniques to the data you have access to in your day-to-day role. You will be able to quickly identify key insights, make more informed decisions and communicate your findings to your stakeholders.

It represents a significant investment by your employer to enable you to develop technical competencies increasingly valuable as data becomes more and more ubiquitous. You will benefit from technical training, coaching and workplace application to develop your data skills and interpersonal behaviours. By the end of the programme, you will be confidently applying analytical techniques such as clustering, regression and classification to your day-to-day role, as well as have a firm understanding of emerging technologies such as Machine Learning, Deep Learning and Neural Networks and their application in your professional context. The volume of data we are all being exposed to in our day-to-day lives continues to grow, and increasingly, the technical skills to manipulate, interrogate and interpret that data are becoming core professional competencies that can be applied across industries, markets and business functions.

## 2. Who is the programme for?

It is designed for people who are looking to gain technical data skills to enable them to make better use of the data they have access to in their day-to-day role, regardless of their corporate function. They may work in sales and marketing and want to be able to create more sophisticated customer segmentation or may work in operational management and want to be able to create performance dashboards to enable easier tracking of key metrics.

Participants will typically work in a role that requires them to manipulate data – whether in Microsoft Excel or business intelligence system - but have not received formal training or want to achieve formal professional accreditation. Participants on the programme should be committed to their professional development and keen to acquire new knowledge and skills.

## 3. How long does the programme take?

The programme lasts 18 months, quickly building familiarity with advanced analytical tools and concepts through hands-on, practical learning.

## 4. What will I have to do?

You will spend 16-months (+2-months EPA) developing technical data analytics skills through a blended learning programme, introducing key content and preparing you for the professional accreditations and End Point Assessment.

Over the 16 months (+2-months EPA), you will take part in 16 workshops facilitated by our data science experts to introduce new concepts, tools and techniques. You will become familiar with using the techniques to analyse data through self-guided bite-sized practical exercises and a library of custom-created learning content accessed online. To support you to apply your learning to your role, you will be provided with a dedicated personal coach, who you will meet on a monthly basis. You will also be able to contact our data science experts for content or technical support.

You will undertake external End Point Assessment to show that you have reached the level required of a certified Data Analyst.

## 5. What is the time commitment?

- 16 in-person workshops to introduce new concepts and techniques
- One hour of one-to-one tuition monthly, either in person or online, plus preparation time
- Approximately 3-4 hours per week completing guided self-learning including practical exercises to build familiarity with industry-standard tools and analytical techniques
- You will also be spending time putting your new skills and knowledge into practice in the workplace. We will record these activities as a key component of the course.
- You will be expected to build a portfolio of evidence showing that you have mastered all aspects of high-quality data analysis.

## 6. What is my employer investing in me to undertake the programme?

Your organisation is making a £15,000 investment in you to complete this programme. Since 2017 businesses have paid a Government training levy (the Apprenticeship Levy) which your employer has chosen to invest in your personal development as a highly valued employee.

## 7. What qualifications will I achieve?

You will gain the Level 4 Data Analyst apprenticeship standard upon completion of the programme.

## 8. How will I be assessed?

- At the end of the programme, you will be required to complete an End Point Assessment. This will include:
- Completion of a portfolio of projects completed throughout the course
  - Completion of a synoptic project (e.g. build your own data dashboard) to demonstrate your ability to apply these skills to a real-world scenario
  - A final professional interview with an industry-leading expert where you will discuss the rationale behind your data projects and application of these skills to your role.

## 9. Am I eligible to undertake the programme? If your employer is using the Apprenticeship Levy to fund your training, you need to meet some Government eligibility criteria. The main ones are:

- You must be a UK resident who has lived in the UK for last 3 years, have an English work postcode, and work more than 50% of the time in England.
- If you are a previous resident of EU/EEA, you must have gained pre-settlement or settlement status, have an English work postcode, and work more than 50% of the time in England.
- If you are a non-UK resident, you must be on an acceptable Visa (the visa must cover the full duration of the Apprenticeship including EPA) and have lived in the UK for the last 3 years, have an English work postcode and work more than 50% of the time in England.
- Work more than 16 hours (hours lower than this may be considered) per week on a PAYE contract (fixed term contracts need to have full duration of the programme and EPA left on it).
- Have a substantial skills gap between your current capability and where you would be on completion of a programme.

## 10. How do I join?

To join the programme, you will first need to register your interest with your employer. From there, you will be invited to complete a short aptitude assessment to assess your suitability for the programme. This will include a short assessment of your understanding of statistics and probability.

Your employer will then give Corndel a list of the suitable people wishing to enrol. We will send you an online enrolment form, ask for proof of ID and residency, and check your eligibility. Government rules mean that you will also need to show us evidence of past English and Maths qualifications.

**Corndel works with leading  
UK organisations to develop  
the organisational capabilities  
which drive performance.**

We design and deliver people development programmes to support operational improvement, digital transformation, data analytics, cultural change and leadership development.

Our programmes are carefully designed to take advantage of the Apprenticeship Levy, so organisations can maximise their investment in valued employees.

Corndel Ltd, 5th Floor  
80 Old Street  
London  
EC1V 9AZ  
020 8102 9040 | [info@corndel.com](mailto:info@corndel.com)

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