

Corndel Data Analytics Diploma

Technical Specification

The Corndel Data Analytics Diploma is a professional development programme that builds practical data analytics skills for professionals from a variety of corporate functions.

The programme is designed to be hands-on. Participants become proficient with the tools and techniques used in data analysis through practical exercises and applying their learning to their work.

In order for participants to benefit from this learning experience, they will require access to a number of tools and systems on their work computer. This document provides a comprehensive list of the hardware and software they will need as well as online learning resources they may need access to.

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To help us tailor the course, please fill in the table in the Software requirements section with any equivalent tools to those required that you already use in the organisation. This will help us to ensure that participants are able to readily translate their learning to the tools they have access to in their everyday roles.



Hardware requirements:

We recommend participants have access to a work computer (laptop or desktop) that has:

- Minimum 8GB RAM;
- Reasonably powerful x86 processor;
- Minimum 8GB free hard drive capacity;
- Windows, Mac or Linux operating system;
- Access to a webcam and microphone for video conferencing with their coach.



Software requirements:

Data analytics tools

Tool	Purpose	Example software	Download link	Software used in your organisation
Anaconda	<p>Anaconda is a popular environment manager for both Python and R. It includes both installations for the programming language themselves and IDE/editors.</p> <p>If the latest Anaconda installation is provided for learners, then the next two rows can be ignored.</p>	Anaconda	https://www.anaconda.com/products/individual	
R and/or Python	Two of the most popular coding languages for data analysis.	R and/or Python (3 or above)	https://www.r-project.org/ https://wiki.python.org/moin/BeginnersGuide/Download	
Python IDE/editor and/or R IDE/editor	Software packages built for writing and running code in Python/R	JupyterLab or Jupyter Notebook and/or RStudio	https://jupyter.org/install https://www.rstudio.com/products/rstudio/download/#download	
Git	A version control system for tracking changes in source code.	Git	https://git-scm.com/	
An SQL server	A database management system to manage data held in a relational database. This software package allows you to create and query databases with SQL.	PostgreSQL with pgAdmin	https://www.postgresql.org/ https://www.pgadmin.org/docs/pgadmin4/development/desktop_deployment.html	
Any other data analytics tools (e.g. PowerBI, Tableau, etc.)	You may use a variety of other tools in your organisation. It would be helpful for us to understand so we can tailor the course. Please let us know what tools are already in use in your organisation.	N/A	N/A	

Core software

In addition to the tools for data analytics, participants will need the following to be able to effectively complete the course.

Tool	Purpose	Our suggested software	Software used in your organisation
Video conferencing software	For communicating with their coach.	(Skype, Microsoft Teams, Google Hangouts, etc.)	
Spreadsheet tool	In many cases, traditional spreadsheet software is one of the most popular tools for data analysis.	Microsoft Excel	



Online learning resources:

Participants will require access to the following websites that host learning resources:

Resource	Rationale	Domain
Corndel Digital Hub	An online portal that gives learners access to a secure Corndel server in which they will complete practical learning. This portal is predominantly used for workshops so is essential to ensure participants have access. N.B.: This server often works best with Chrome web-browser.	corndeldigitalhub.com
GitHub	An online repository for sharing and learning code	github.com
Kaggle	A good source of sample datasets to practice Interactive remote Jupyter notebooks, a great source of free learning resources for a number of programming languages. This is used in Python-focused workshops (starting at the third workshop) and should be available throughout the course.	kaggle.com
MyBinder		mybinder.org
Python resources	For documentation and packages	python.org docs.python.org pydata.org pandas.pydata.org pypi.org
R resources	For documentation and packages	rstudio.com r-project.org cran.r-project.org
ReadTheDocs	Repository of documentation for quite a lot of open source projects, also the place where listings of useful mybinder learning resources live	readthedocs.io readthedocs.org
Stack Overflow	An online community of developers that can help solve almost any coding query – for those learning to code, it's an invaluable source for finding help	stackoverflow.com
Stat Trek	Free online learning materials and tools that cover statistics, probability, regression, survey sampling, and matrix algebra - all explained in plain English. Useful as a supplementary resource	stattrek.com
Towardsdatascience	An online library of learning content and articles produced for and by data scientists.	towardsdatascience.com

Wikipedia	Very useful for finding more in depth and/or alternate explanations for terms and concepts on technical and mathematical subjects	Wikipedia.org Simple.wikipedia.org
Youtube	Occasionally, we'll signpost to pre-existing, high quality explainer content	youtube.com



Communications whitelisting:

We will require certain domains and email addresses to be whitelisted so participants can receive emails as we onboard them onto the programme and throughout the course.

Company	Rationale	Domain/IP	Email
Aptem	Learning management system where all course content is stored and progress tracked	Aptem.co.uk 139.162.220.145	info@aptem.co.uk
Corndel	For general communications	Corndel.com Authenticate via SPF record	info@corndel.com
SkillsForward	For initial skills assessment	https://cdn.mysf.co.uk/ Authenticate via SPF record	support@skillsforward.co.uk noreply@skillsforward.co.uk

