



The Data Refinery

Cultivating the Modern Data Science Practitioner

The Art of Storytelling in the Technology Age: Excel, SQL,
Python, R & Microsoft Power BI

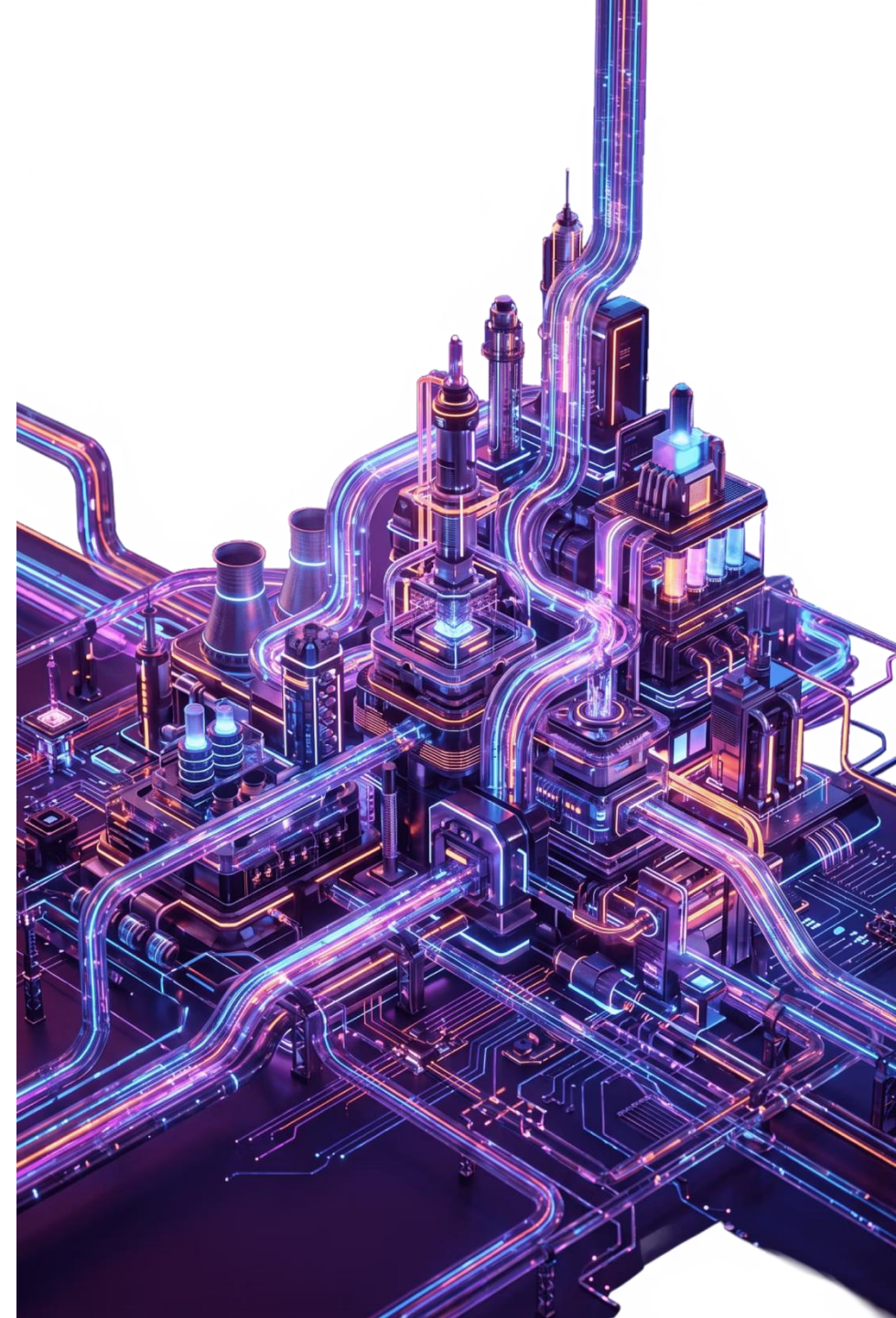
18 MONTHS

SAQA ID 118708

NQF LEVEL 5

185 CREDITS

QCTO & MICTSETA ACCREDITED



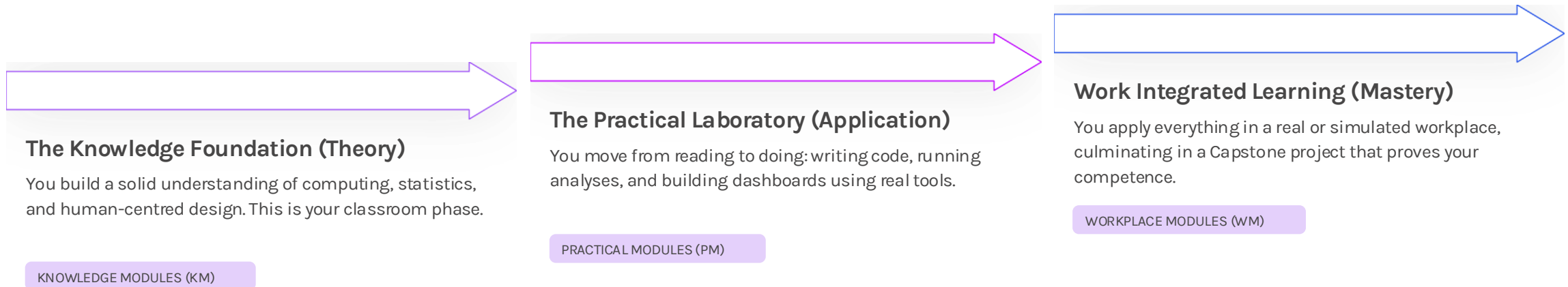
Why Data Science Matters

"Data is the new oil, but without a refinery, it cannot power the engine of the Fourth Industrial Revolution."

Businesses today sit on mountains of data from IoT devices, transactions, and digital interactions, but most lack the skilled people to make sense of it. A Data Science Practitioner is the critical bridge between raw data and real business decisions.

How the Programme Works

The qualification is built on three progressive stages. You start with theory, move into hands-on practice, and finish by applying everything in a real or simulated workplace.



What Is a Data Science Practitioner?

This qualification sits at the intersection of three disciplines. Understanding where Data Science fits helps you see exactly what you'll be able to do when you graduate.

Data Engineering

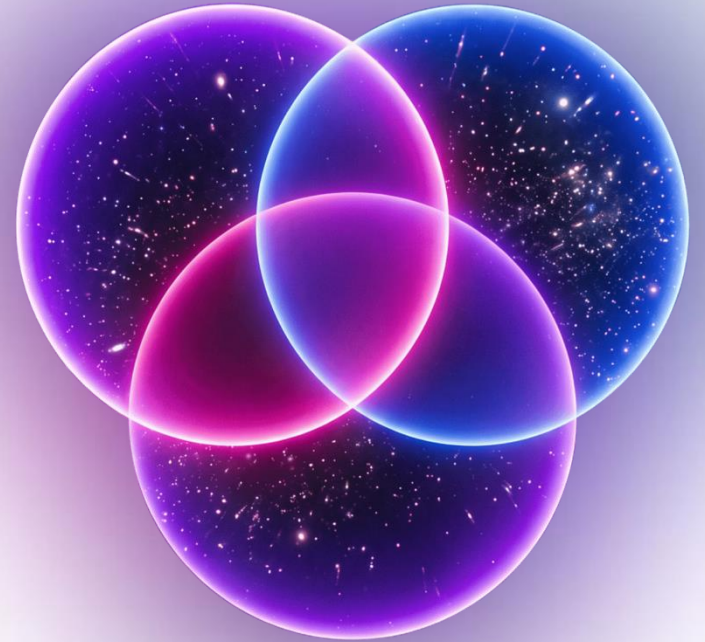
Focuses on systems and architecture: building and capturing the data pipelines that feed the organisation.

Data Science (This Qualification)

Focuses on advanced analytics and manipulation: understanding the tools, processes, and challenges of turning data into insight.

Business Intelligence

Focuses on enterprise strategy: converting data into information, information into knowledge, and knowledge into intelligence.





Building Your Technical Foundation

The Knowledge Modules give you the theory you need before you touch a single line of code. Think of it as building the foundation before the house.

Applied Data Analysis (KM-07, KM-08)

Comprehensive knowledge of the three most popular programming languages in data science, data structures, and data governance.

Statistical Essentials (KM-06)

The mathematics of relationship. Using regression analysis to plot variables and find the line of best fit.

Computing Systems & Theory (KM-03, KM-04)

The fundamental hardware and software architecture necessary for digital logic.

Two Sides of the Same Practitioner

A great Data Science Practitioner is not just a coder. They are equally skilled at working with people. This programme deliberately develops both sides.



Human-Centred

Design Thinking Workshops (PM-09) & Ethical Collaboration (PM-10). You'll develop emotional intelligence, teamwork, and enterprise accountability.



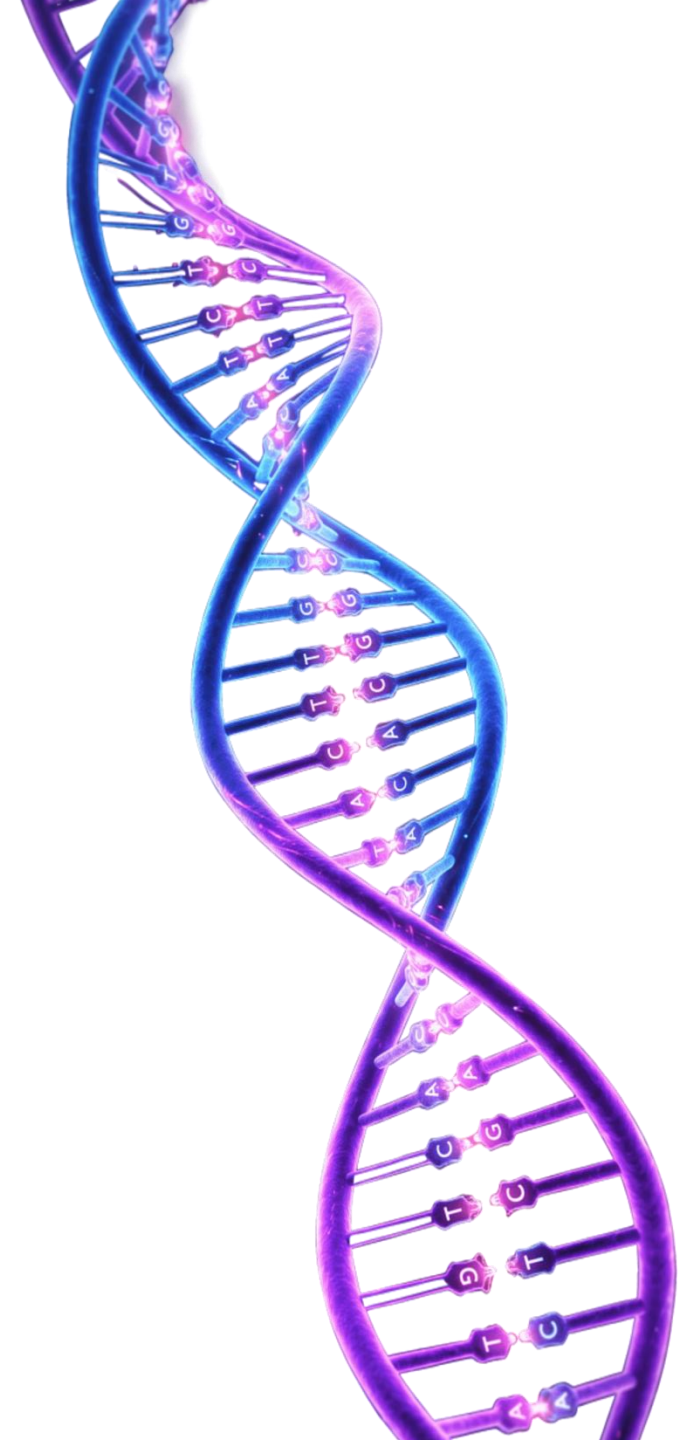
The Core

Preparing Descriptive Analytic Reports (PM-08). Where human empathy dictates the visual narrative of the data.



Highly Technical

Applying Code (PM-02) & Processing Unstructured Data (PM-06). Rigorous logical thinking, binary/hex mathematics (PM-01), and algorithmic structures.



Hands-On in the Practical Laboratory

The Practical Modules (PM-01 to PM-10) are where theory becomes skill. Learners work with large volumes of real structured and unstructured data, using software tools to find patterns that matter.



Logical & Mathematical Execution

Binary logic, algorithmic thinking, and mathematical problem-solving applied to real datasets.



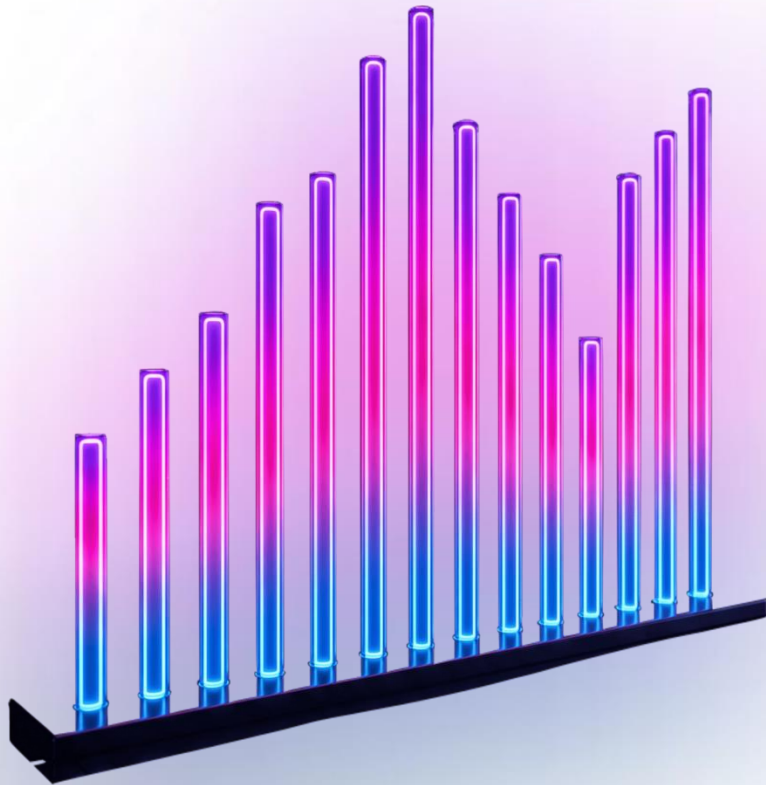
Statistical Data Processing

Using regression, probability, and statistical models to uncover hidden trends in the data.



Visual Analytics Platforms

Building dashboards and reports in Power BI and other tools that communicate findings clearly to decision-makers.



Telling the Story with Data

Data without a story is just noise. This programme teaches you how to design analytical narratives that compel decision-makers to act.

01

Know Your Audience

Every design choice must be based entirely on who will be viewing the information. Different audiences need different stories.

02

Set a Clear Goal

Establish a logical narrative. Set clear goals that must be conveyed through the infographic or report before you build anything.

03

Choose the Right Chart

A pie chart does not complement all information. Accurately matching the chart to the statistic is critical for diagnostic and prescriptive reporting.

Designing for People First

Technology is only as good as the human thinking behind it. This programme grounds every technical skill in human-centred design principles.



The Human Rule

No matter the context, all design activity is social in nature. Innovation must always return to a human-centric point of view.



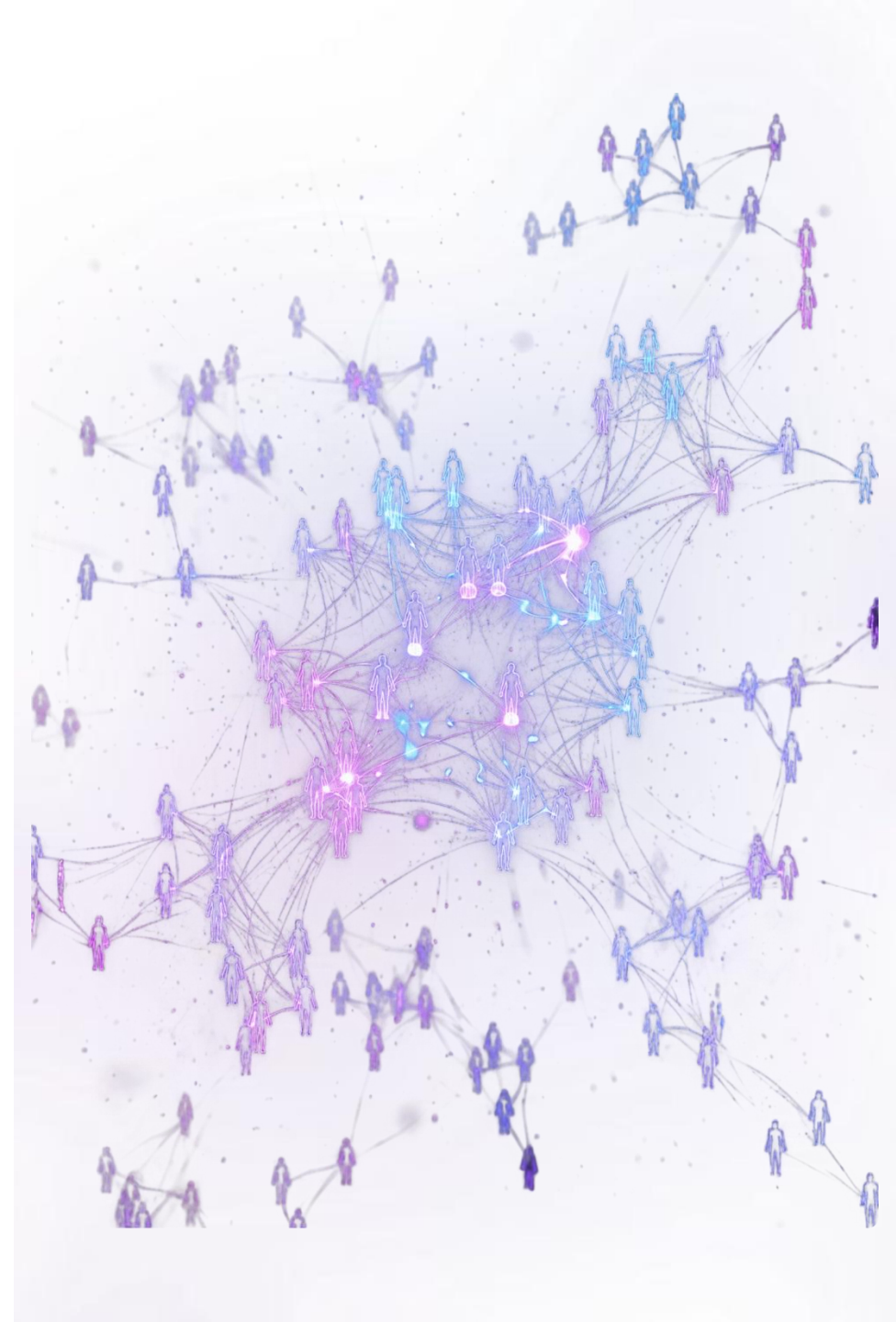
The Ambiguity Rule

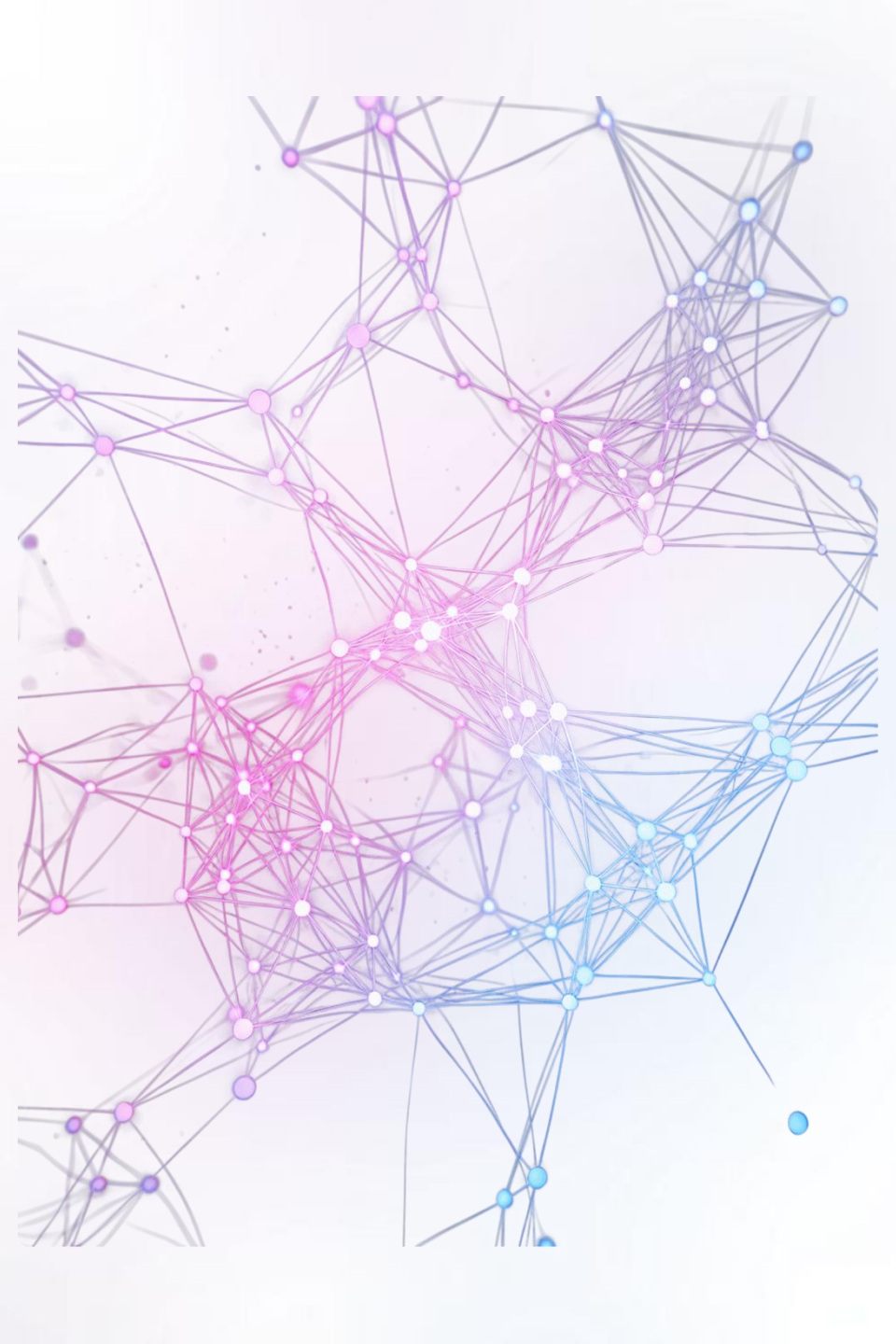
Ambiguity is inevitable and cannot be oversimplified. Experimenting at the limits of knowledge is crucial for fresh perspectives.



The Redesign Rule

Basic human needs remain unchanged; we only redesign the means of fulfilling these needs or reaching desired outcomes.





Working Like a Professional

Data science doesn't happen in isolation. The programme builds the workplace behaviours that employers actually need: communication, collaboration, and accountability.

Verbal Communication

Analysing the audience, selecting precise objectives, and presenting information clearly so stakeholders are compelled to take action.

Teamwork & Collaboration

Working seamlessly across departments and cultures, sharing responsibilities, and supporting team well-being.

Accountability & Professionalism

Meeting strict deadlines, upholding organisational values, and owning mistakes to learn from them.

From Classroom to Career

Work Integrated Learning (WIL)

Work Integrated Learning (WIL) is the bridge between academic study and industry readiness. Under competent supervision, learners apply acquired competencies in a real or simulated work environment.



Data Collection

Gathering structured and unstructured datasets, ensuring data quality and governance compliance.



Statistical Analysis

Applying regression analysis and probability to uncover hidden trends, patterns, and insights within the raw data.



The Capstone

The ultimate proof of competence. An end-to-end, independent project using an appropriate software toolkit to solve a defined business problem.



Visualisation

Using advanced visual analytics platforms to build descriptive, prescriptive, and diagnostic reports for enterprise stakeholders.

The Calibrated Data Practitioner

When you complete The Data Refinery, you graduate as a practitioner who is ready for the real world: technically sharp, analytically confident, and grounded in human values.



Technically Rigorous

Fluent in multiple programming languages, database structures, and advanced statistical mathematics.



Analytically Astute

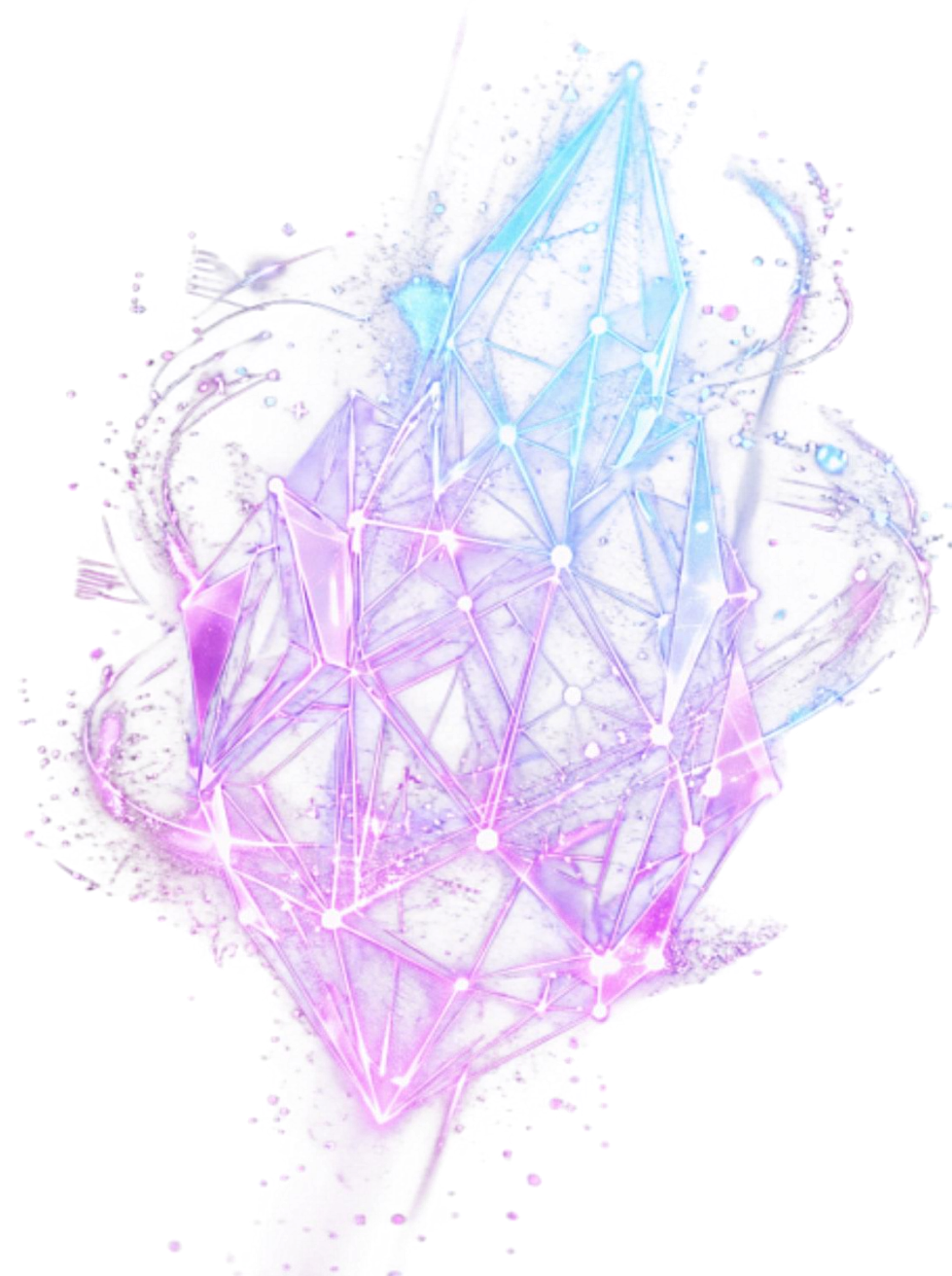
Capable of turning raw, ambiguous datasets into clear, actionable enterprise intelligence.



Human-Centred

Grounded in design thinking, ethical collaboration, and persuasive communication to drive actual business action.

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Pricing: Live, Online Delivery

Occupational Certification: Data Science Practitioner (18 Month Qualification)

Qualification Name	Assessments & Moderations	External Integrated Summative Assessment	Statement of Results	Certificate of Competence QCTO	25-49 Participants	50-89 Participants	90-100 Participants
Occupational Certification: Data Science Practitioner (18 Month Qualification)	Yes	Yes	Yes	Yes	R 56,000.00	R 49 160,00	R 43 430,00

1. All prices are Excluding VAT.
2. All Prices exclude laptops, connectivity and stipends for learners.
3. Should cohorts or Groups exceed 100 participants: Woosh Consultants will be open to negotiating the price per person, within reason.
4. The prices above are firm and apply to delivery of these sessions in consecutive working days.
5. All prices include training delivery in a Live Online Delivery Method.
6. All prices include a Certificate of Competence issued by the QCTO upon participants passing the External Integrated Summative Assessment, Statements of Results issued by Woosh Consultants, all Assessments and Moderation, Access to the Master Assess platform for training administration and LMS.