Krisolis

EMPOWER / INNOVATE / EVOLVE

Your Data Journey Starts Here

And Krisolis will be with you at every step of the way.

Vision & Mission

At Krisolis we **empower** you to **innovate** and **evolve** through every stage of your data journey.

Our mission is for **our team to become a part of your team**. Through **training mentoring** and **consulting**, our flexible approach means that we're able support you using a variety of methods, always staying focused on your objectives.

"We work alongside you and your organisation to foster a culture of innovation and excellence using the latest tools in data science and AI"

Aoife D'Arcy
Krisolis CEO

About Krisolis

Rather than simply providing standard training courses in data science and AI, we combine our skills as leading analytics experts with a sharp focus on our clients to deliver what they need.

We work hard to understand your business, where it has come from and where it's going. Our experience as both **practitioners and academics** means we're uniquely positioned to **partner with you to achieve your learning objectives** by coaching and supporting individuals, teams, departments and the entire organisation.

What we offer

- Customised Training Progammes
- Mentorship Programmes
- Consultancy
- Strategy Devlopment

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The Krisolis Approach to Learning

Each of our training courses and programmes considers three core elements: **Theory, Tools and Application**.

Each are approached separately and blended in a way that means **learnings can be confidently applied once back in the workplace**, and easily transferred as technologies change.

Choose from or combine

- Classroom-based Learning
- Facilitated Workshops
- Coaching and Mentoring
- Face to Face or Online Support

Academies and Accredited Programmes

Our **academies** and **accredited programmes** are designed to support your organisation through its Data and AI journey.

Our delivery can **range between 4 and 16 weeks**, depending on which programme you choose, so it provides a substantial opportunity to address your team's critical learning needs, develop skills and close knowledge gaps, **all delivered by our expert team and faculty.**

Customised Training and Learning Paths

Our customised learning paths are **flexible learning programmes** that are **tailored to your needs** and utilise a **range of learning approaches** to ensure we always stay focused on the objectives of your teams and organisation.

Standard Training Courses and Workshops

Each of our courses is **designed to work as a standalone piece of learning or can be combined** with multiple courses, facilitated workshops, mentoring and coaching and other learning-beyond-the-classroom initiatives to ensure engaging and rewarding learning paths.

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Adoption

One of the central principles of our training programmes is ensuring that skills and knowledge learned with us are **applied effectively within your business.**

To ensure this we offer a variety of courses for **business leaders, programme managers and decision makers** that ensure that data solutions created by more technical teams can be **easily adopted across the organisation.**

Topics covered include:

- Artifical Intelligence (AI) and its applications
- How to get the best from your data
- How to embed effective work practices to allow your team to work well together

Fundamentals

Our Fundamentals courses demonstrate how you can **put this generation's most powerful business tools to work** for you.

Topics covered include:

- Effective Data Visualisation
- Business Analytics
- Introduction to Programming with R / Python / SQL
- Data Tools and their Applications
- Data Preparation and Pre-Processing

Standard Training Courses and Workshops

Advanced

Our Advanced courses are designed to help you and your team **evolve your existing data, machine learning and artificial intelligence skills** using the most up to date and advanced tools available.

Topics covered include:

- Deep Learning
- Machine Learning
- Generative AI
- Big Data
- Time Series Analysis
- Natural Language Processing
- Network Analytics
- Anomaly Detection
- Reinforcement Learning

Technologies We Use:

RStudio, Keras, tableau, jupyter, python, TensorFlow, pandas, PyTorch, SAS, SQL, Power BI

All of our course material can be **customised** to best suit your training needs and to ensure **engaging** and **rewarding** learning paths.

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"All of our course material can be **customised** to best suit your training needs and to ensure **engaging** and **rewarding** learning paths."

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Companies can **integrate any combination of our courses, workshops and adoption offerings** to create the most effective learning solution for your teams.

You can **focus on the skills requirements** within your organisation, across different roles and areas of your business.

Managers can adjust the program design to **suit the timelines and budget available** to your teams, departments and organisation.

Customised Training and Learning Paths

Our customised learning paths allow your organisation to create **role based learning journeys** designed to upskill staff and **empower them to implement the strategic goals** of your organisation.

Each role has different learning needs and will engage with data driven solutions for different reasons. Some will need to design and build those data driven solutions, while others will need to use these solutions to improve business outcomes.

Our learning paths are **custom built to meet your organisational needs**. This in turn will lead to an **enriched use of data science, analytics, machine learning and AI** across your organisation.

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Graduate Programme

Learning Path

What will I learn?

- Understand the terms and terminology used in data science, machine learning and AI setting.
- Understand the process of managing data driven projects to achieve effective business outcomes.
- Understand the fundamental programming techniques for developing code-based solutions.
- Understand how to conduct exploratory analysis on your data and assess its quality.
- Frame business problems as ML problems and solve them using appropriate techniques.
- Understand how to prepare data for input into machine learning models.
- Understand the fundamental theories of machine learning, and the most important machine learning approaches.
- Understand how to apply machine learning techniques to deliver impact and develop a data driven solution for an appropriate business problem.

Role Description

Graduates will embark on an exciting journey of discovery and innovation in the field of data science, machine learning and artificial intelligence. This role is designed to build upon their academic knowledge by **immersing them in practical, real-world applications of data driven technologies**.

They will learn to manipulate and refine data, engage with machine learning algorithms, and apply their skills to solve complex problems across various industries. This learning path offers a blend of classroom training, mentorship, hands-on projects, and continuous learning opportunities, equipping you with the tools necessary to evolve into a proficient AI professional.

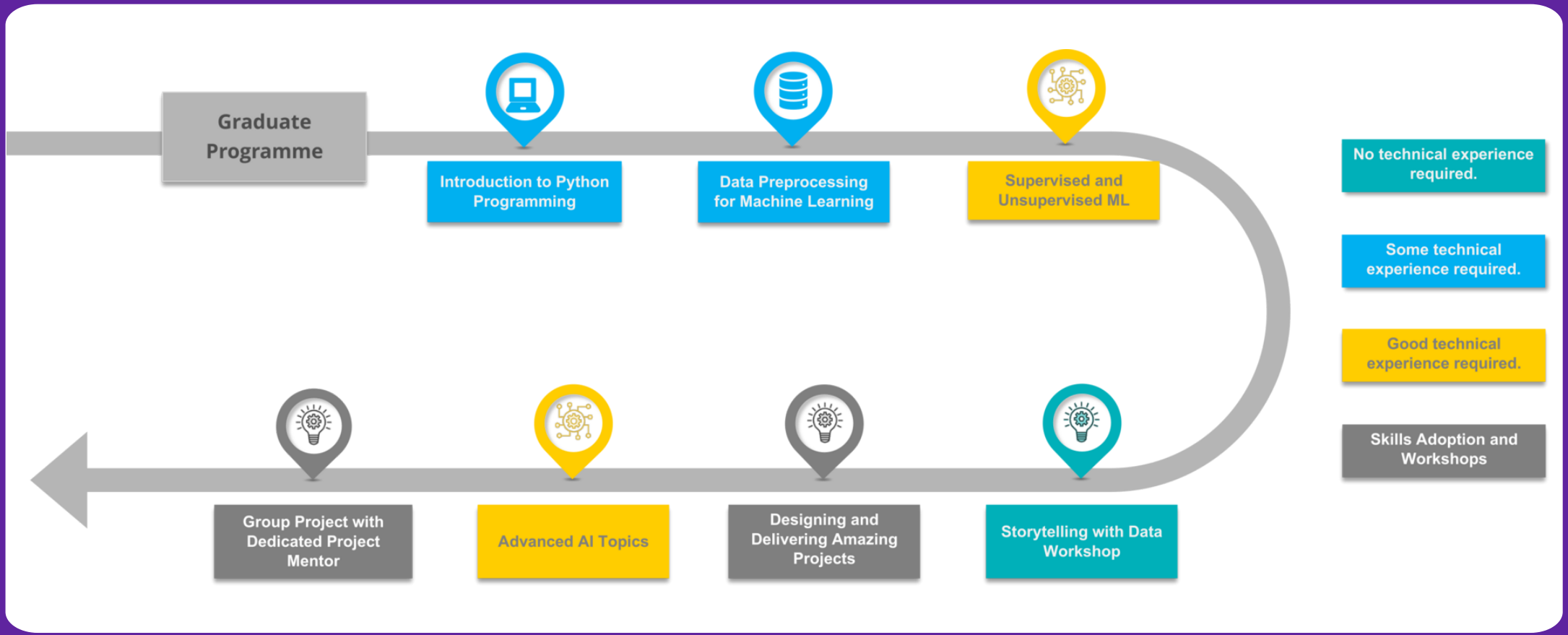
Their work will **directly contribute to advancing AI initiatives, enhancing product functionalities, and driving technological growth** within their organization. This comprehensive learning path ensures they stay at the **forefront of industry trends and best practices.**

To find out more about this course send us an email at info@krisolis.ie

Graduate Programme

Learning Path

Sample learning path for a **Graduate Programme**:



Introduction to Python Programming

What will I learn?

- Understand the difference between different coding environments used for Python and know the advantages of using Jupyter Notebooks for analysis projects.
- Write effective Python code, correct errors and debug code.
- Work with the different data structures in Python and know when to use them.
- Use flow control and create user defined functions in Python.
- Know the difference between different programming paradigms such as Object-Oriented programming and procedural programming.

Overview

Becoming a proficient developer, data analyst and data scientist requires mastery of a set of sophisticated tools. The Python programming language is amongst the most powerful and flexible tools for developing software and data science applications.

This course helps participants with no prior programming experience to master the basics of the Python programming language. After attending this course you will understand how to write and debug computer programmes using the Python programming language.

Is this course for me?

This course is aimed at anyone who wants to harness the power of Python programming in their roles to develop code-based applications.

To find out more about this course send us an email at info@krisolis.ie

Data Preprocessing for Machine Learning

What will I learn?

- Understand the fundamental theories of machine learning, and the most important machine learning approaches.
- Be familiar with designing data structures for machine learning as well as introducing a wide range of data exploration techniques and how to apply them.
- Be comfortable analysing the quality of data and validating datasets.
- Be comfortable preparing data for machine learning including data aggregations, joining data, filtering, and deriving new features.
- Understand and apply the core data pre-processing approaches for machine learning, such as data sampling, imputations and data transformations.

Overview

It is well known that the first steps in any data science project are to retrieve data from disparate data sources, bring it together into one analytically ready data source and initial exploratory analysis. Often the technical skills are known to complete these tasks, but it can be difficult to know how to apply these skills effectively. Sometimes the struggle is to match your data to the business problems you are trying to solve and to structure the data correctly for the type of analysis you want to do.

This course uses examples from clustering and prediction to time series forecasting to demystify the process of transforming raw data into insight-filled data ready for driving your analytics solutions. This course has been designed to guide participants through the most important topics in designing and building analytics and machine learning solutions, and how they should be applied to real-world scenarios. This course can be delivered using Python, R, or SAS.

Is this course for me?

This course is targeted at participants who are familiar with analytics techniques and are involved in deploying analytics solutions in their organisations. This course assumes delegates are already comfortable with the technology being used (e.g. Python, R or SAS).

To find out more about this course send us an email at info@krisolis.ie

Supervised and Unsupervised Machine Learning

What will I learn?

- Understand the distinctions between semi-supervised, supervised and unsupervised machine learning.
- Apply semi-supervised learning techniques including pseudo-labelling, co-training, and active learning.
- Evaluate semi-supervised machine learning systems.

Overview

For many data analytics scenarios, while data is freely available, labelled data can be very scarce and expensive to collect. Semi-supervised machine learning algorithms couple small amounts of labelled data with large amounts of unlabelled data to build predictive models.

This course will explore the most important semi-supervised machine learning techniques and explore their applications and practical considerations for using them.

Is this course for me?

Attendees should be familiar with basic supervised and unsupervised machine learning methods, and comfortable with these methods using appropriate machine learning technology.

To find out more about this course send us an email at info@krisolis.ie

Storytelling with Data Workshop

What will I learn?

- Understand the fundamentals of storytelling and know the attributes of a good storyteller.
- Understand how to design and build a narrative for a presentation, dashboard or report using storyboarding techniques.
- ·Know how to apply the fundamentals of data visualization to create informative charts.
- Know how to choose the right visualisation type for the job at hand.
- ·Understand how to bring it all together to effectively tell your data story.

Overview

Organisations are using data to take advantage of actionable insights in diverse industries from banking to horse breeding. A key component of any data-driven project is to effectively tell a story with the insight created. Stories give context to your insight and increase the impact of your analysis.

This course provides an understanding of the theory underpinning effective data visualisation and introduces the knowledge needed to create compelling stories and dialogues that communicate key insights from data.

Upon completion of this course, you will have mastered the art of data storytelling having learned to move from business question to effective visualisation, to telling an impactful story.

Is this course for me?

This programme is aimed at anyone who makes decisions from data in reports and analysis, or anyone who creates reports and analysis for decision makers.

No prior knowledge or skills are required to take this course.

To find out more about this course send us an email at info@krisolis.ie

Designing and Delivering Amazing Projects

What will I learn?

- Understand the process of 'problem solving'.
- Conduct a requirements gathering exercise and define the 'actual' business problem.
- Architect analytics solutions that will deliver business impact.
- Successfully manage data science, analytics and AI projects using our Agile Framework.
- Have discussed and agreed ways of working to deliver impactful projects.

Overview

Project management is a skill that is required in all aspects of business. Data science, analytics and AI projects have their own challenges demanding a data-oriented project management approach.

This workshop describes good general project management practice and methodologies. It then focuses on providing the scaffolding for analytics project management specifically.

It will introduce our Agile Framework which incorporates elements of Problem Solving, and the Agile and CRISP-DM methodologies to ensure that every data project delivers positive business impact.

Is this course for me?

This workshop is aimed at technical managers, project managers, and data science, analytics and AI professionals who are tasked with running and participating in data projects.

To find out more about this course send us an email at info@krisolis.ie

Deep Learning

What will I learn?

- Frame business problems as deep learning problems and solve them using appropriate techniques.
- Understand the basic structure of artificial neural networks, as well as gradient descent and the back-propagation of error algorithm.
- Appreciate the complications involved in building deep neural networks.
- Understand how to apply appropriate deep learning techniques (e.g. transformer models) to text understanding problems (e.g. classification, translation, m and generation).
- Understand how to apply appropriate deep learning techniques (e.g. recurrent neural networks) to text understanding problems (e.g. classification and translation).

Overview

Recent developments in machine learning approaches, collectively referred to as deep learning, are responsible for the large performance gains made in the last decade in tasks such as voice recognition, image and video classification, and forecasting.

Deep learning refers to a relatively recent set of generative machine learning techniques that autonomously generate high-level representations from raw data sources, and use these representations to perform machine learning tasks such as classification, regression, and clustering.

Through real world examples, discussions, and live code demonstrations this one-day workshop designed for AI professionals introduces the most important deep learning techniques for supervised and unsupervised machine learning tasks.

This workshop has been designed to equip participants with the most important deep learning techniques, and an understanding of how they should be applied to build real-world relevant solutions.

Is this course for me?

This course is aimed at AI professionals seeking to further their existing skills with an intensive, demonstration-led, introduction to Deep Learning.

To find out more about this course send us an email at info@krisolis.ie

Time Series Analysis

Graduate Programme

What will I learn?

- Understand the fundamentals of time series forecasting and how ARIMA models can be used for this.
- Understand how time-series-specific machine learning techniques can be used for clustering, classification, and forecasting.
- Be able to fit SLR, Exponential Smoothing and ARIMAX models to time series data.
- Be able to accommodate trend, as well as seasonal and event-related variation, in time series models.
- Be able to interpret and evaluate time series models as well as be able to identify relative strengths and weaknesses of the model types.

Overview

Time series data arises in applications from finance to personal activity monitoring and has unique characteristics that demand the use of specialised techniques.

The course covers the fundamentals of modelling time series data and focuses on the application of the main model types used to analyse univariate time series: simple linear regression, exponential smoothing and autoregressive integrated moving average with exogenous variables (ARIMAX).

Machine learning approaches can also be applied to high-volume, high-velocity time series data. This course introduces how the most important of these can be used for clustering, classification, and forecasting tasks.

Is this course for me?

This course is aimed at data professionals seeking to further their existing skills with an intensive, demonstration-led, introduction to working with time series data.

To find out more about this course send us an email at info@krisolis.ie

Contact Krisolis

To discuss your team's skills development, and how to make the best use of our training, mentoring and consultancy services please contact us using the following:

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LinkedIn

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