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Certified Artificial Intelligence Practitioner™ (CAIP)

ACS REGISTRARS ISO 29990

ACS REGISTRARS Quality Assurance ISO 9001

ilm Approved Centre

PMI Registered Education Provider Project Management Institute

bci Business Continuity Institute Corporate Partnership
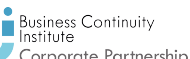
Transforming
Business *for* Good

Course content

Why Choose this Training Course?

Artificial intelligence (AI) and machine learning (ML) have become essential parts of the toolset for many organizations. When used effectively, these tools provide actionable insights that drive critical decisions and enable organizations to create exciting, new, and innovative products and services. This training course shows you how to apply various approaches and algorithms to solve business problems through AI and ML, all while following a methodical workflow for developing data-driven solutions.

What are the Goals?
At the end of this training course, you will develop AI solutions for business problems. You will:

Solve a given business problem using AI and ML.
Prepare data for use in machine learning.
Train, evaluate, and tune a machine learning model.
Build linear regression models.
Build forecasting models.
Build classification models using logistic regression and k -nearest neighbor.
Build clustering models.
Build classification and regression models using decision trees and random forests.
Build classification and regression models using support-vector machines (SVMs).
Build artificial neural networks for deep learning.
Put machine learning models into operation using automated processes.
Maintain machine learning pipelines and models while they are in production.

Who is this Training Course for?

The skills covered in this training course converge on four areas software development, IT operations, applied math and statistics, and business analysis. Target participants for this course should be looking to build upon their knowledge of the data science process so that they can apply AI systems, particularly machine learning models, to business problems.

So, the target participant is likely a data science practitioner, software developer, or business analyst looking to expand their knowledge of machine learning algorithms and how they can help create intelligent decision-making products that bring value to the business.

A typical participant in this course should have several years of experience with computing technology, including some aptitude in computer programming.

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Course Outline

Day One : Solving Business Problems Using AI and ML

Identify AI and ML Solutions for Business Problems
Formulate a Machine Learning Problem
Select Approaches to Machine Learning

Preparing Data

Collect Data
Transform Data
Engineer Features
Work with Unstructured Data

Day Two : Training, Evaluating, and Tuning a Machine Learning Model

Train a Machine Learning Model
Evaluate and Tune a Machine Learning Model

Building Linear Regression Models

Build Regression Models Using Linear Algebra
Build Regularized Linear Regression Models
Build Iterative Linear Regression Models

Building Forecasting Models

Build Univariate Time Series Models
Build Multivariate Time Series Models

Day Three : Building Classification Models Using Logistic Regression and k-Nearest Neighbor

Train Binary Classification Models Using Logistic Regression
Train Binary Classification Models Using k-Nearest Neighbor
Train Multi-Class Classification Models
Evaluate Classification Models
Tune Classification Models

Building Clustering Models

Build k-Means Clustering Models
Build Hierarchical Clustering Models

Building Decision Trees and Random Forests

Build Decision Tree Models
Build Random Forest Models

Day Four : Building Support-Vector Machines

Build SVM Models for Classification
Build SVM Models for Regression

Building Artificial Neural Networks

Build Multi-Layer Perceptrons (MLP)
Build Convolutional Neural Networks (CNN)
Build Recurrent Neural Networks (RNN)

Day Five : Operationalizing Machine Learning Models

Deploy Machine Learning Models
Automate the Machine Learning Process with MLOps
Integrate Models into Machine Learning Systems

Maintaining Machine Learning Operations

Secure Machine Learning Pipelines
Maintain Models in Production

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informatech is a global leadership consultancy that aligns people, purpose & strategy - driving socially responsible transformation in global organisations. Our international network includes 215 partners, consultants, and coaches in 24 countries throughout Europe, North America, Latin America, Asia, and Africa. We transform leaders, align teams and create resolve and passion to win. Typical interventions are to accelerate performance, execute strategy and embed capability and change.

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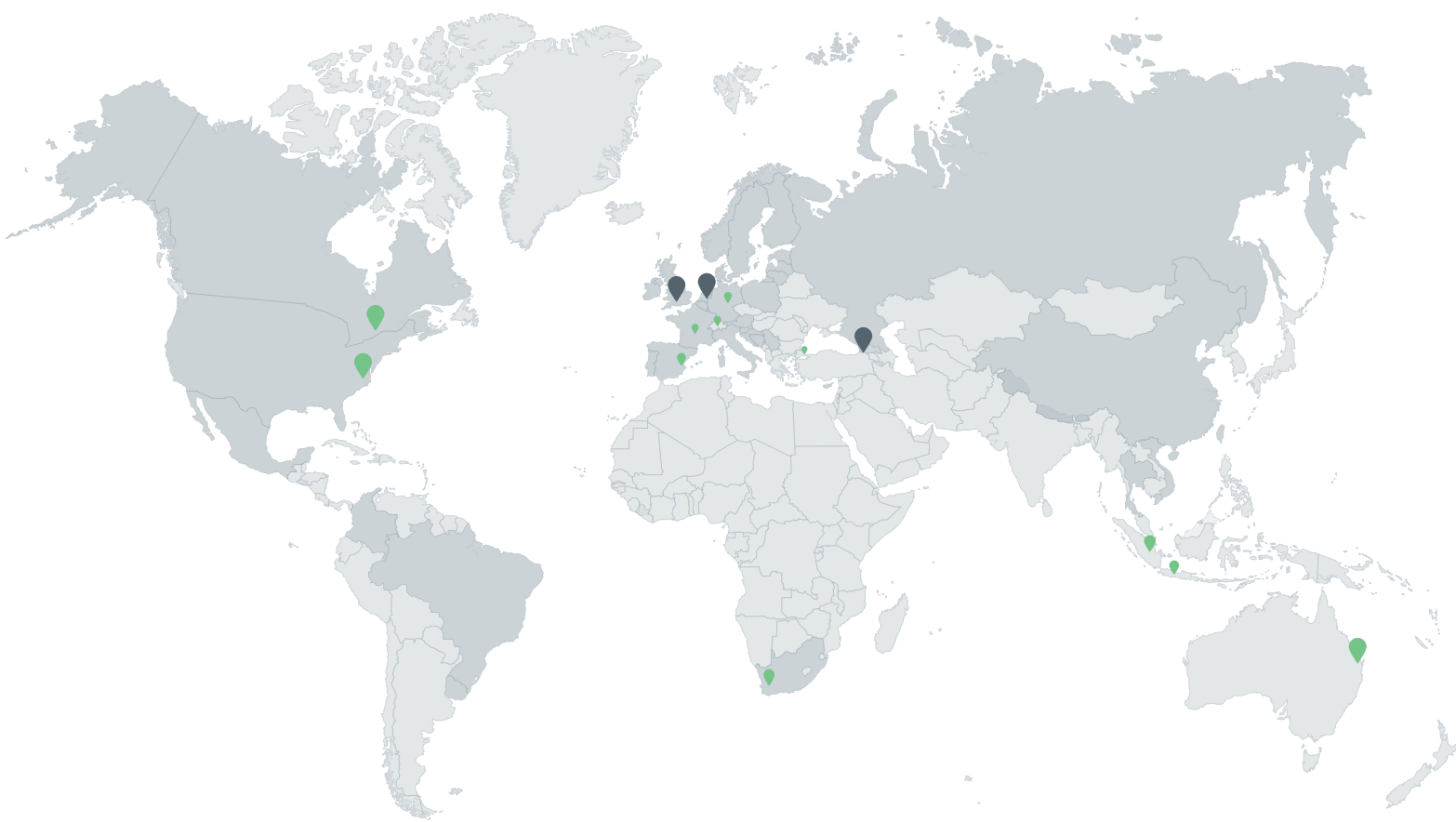
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