

Executive Summary

The Al+ Data certification equips professionals with vital skills for data science. It covers key concepts like Data Science Foundations, Statistics, Programming, and Data Wrangling. Participants delve into advanced topics such as Generative Al and Machine Learning, preparing them for complex data challenges. The program includes a hands-on capstone project focusing on Employee Attrition Prediction. Emphasis is placed on Data-Driven Decision-Making and Data Storytelling for actionable insights. Personalized mentorship, immersive projects, and cutting-edge resources ensure a transformative learning journey, preparing individuals for success in Al and data science.



Date Issued: 20/3/2024

Version: 1.1

Prerequisites

- Basic knowledge of computer science and statistics (beneficial but not mandatory)
- Keen interest in data analysis
- Willingness to learn programming languages such as Python and R



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Exam Blueprint

Number of Questions

50

Passing Score

35/50 or 70%

Duration

90 Minutes

Format

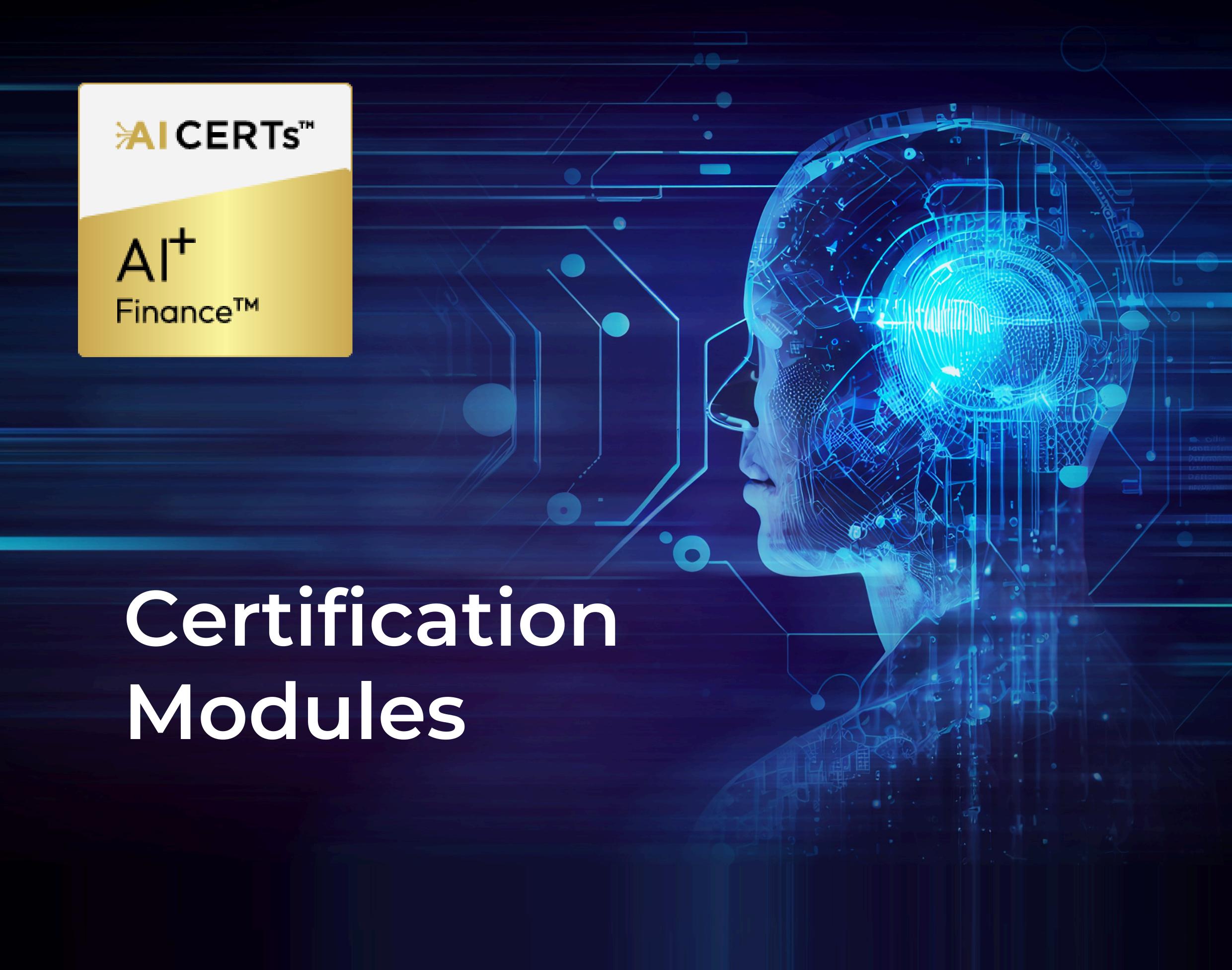
Online via Al
Proctoring platform

Question Type

Multiple Choice/Multiple Response

Exam Overview

Module	Weight	
Foundations of Data Science	5%	
Foundations of Statistics	5%	
Data Sources and Types	6%	
Programming Skills for Data Science	10%	
Data Wrangling and Preprocessing	10%	
Exploratory Data Analysis	12%	
Generative Al Tools for Deriving Insights	6%	
Machine Learning	10%	
Advance Machine Learning	10%	
Data-Driven Decision-Making	10%	
Data Storytelling	6%	
Capstone Project - Employee Attrition Prediction	10%	
	100%	



Foundations of Data Science

- 1.1 Introduction to Data Science
- 1.2 Data Science Life Cycle
- 1.3 Applications of Data Science

Foundations of Statistics

2.1 E	Basic	Conce	pts of	Stat	istics
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- 2.2 Probability Theory
- 2.3 Statistical Inference

Module 3

Data Sources and Types

- 3.1 Types of Data
- 3.2 Data Sources
- 3.3 Data Storage Technologies

Programming Skills for Data Science

- 4.1 Introduction to Python for Data Science
- 4.2 Introduction to R for Data Science

Module 5

Data Wrangling and Preprocessing

- 5.1 Data Imputation Techniques
- 5.2 Handling Outliers and Data Transformation

Module 6

Exploratory Data Analysis (EDA)

- 6.1 Introduction to EDA
- 6.2 Data Visualization

Generative Al Tools for Deriving Insights

- 7.1 Introduction to Generative Al Tools
- 7.2 Applications of Generative Al

Module 8

Machine Learning

- 8.1 Introduction to Supervised Learning Algorithms
- 8.2 Introduction to Unsupervised Learning
- 8.3 Different Algorithms for Clustering
- 8.4 Association Rule Learning with Implementation

Advance Machine Learning

- 9.1 Ensemble Learning Techniques
- 9.2 Dimensionality Reduction
- 9.3 Advanced Optimization Techniques

Module 10

Data-Driven Decision-Making

- 10.1 Introduction to Data-Driven Decision Making
- 10.2 Open Source Tools for Data-Driven Decision Making
- 10.3 Deriving Data-Driven Insights from Sales Dataset

Data Storytelling

11.1 Understanding	the Power	of Data S	torytelling
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- 11.2 Identifying Use Cases and Business Relevance
- 11.3 Crafting Compelling Narratives
- 11.4 Visualizing Data for Impact

Module 12

Capstone Project - Employee Attrition Prediction

- 12.1 Project Introduction and Problem Statement
- 12.2 Data Collection and Preparation
- 12.3 Data Analysis and Modeling
- 12.4 Data Storytelling and Presentation

Certification Outcome

Upon successful completion of the AI+ Data certification, students will acquire a comprehensive grasp of foundational data science principles and methodologies. They will proficiently analyze, model, and extract insights from intricate datasets. Through hands-on practice in Python and R, participants will master data manipulation, visualization, and modeling techniques. They'll explore diverse data sources and storage technologies, honing skills in data wrangling and exploratory analysis for informed decision-making. By delving into advanced topics like generative Al and ensemble learning, students will tackle complex data challenges. Furthermore, they'll refine communication skills, effectively conveying data insights through storytelling and visualization. Real-world projects, including an employee attrition prediction capstone, will showcase their ability to derive actionable solutions from data.



Market Insight

High demand exists for AI and data science professionals proficient in Python, R, and advanced analytics. Effective communicators who can tackle real-world challenges like predicting employee attrition are highly sought after in today's competitive job market.



Value Proposition

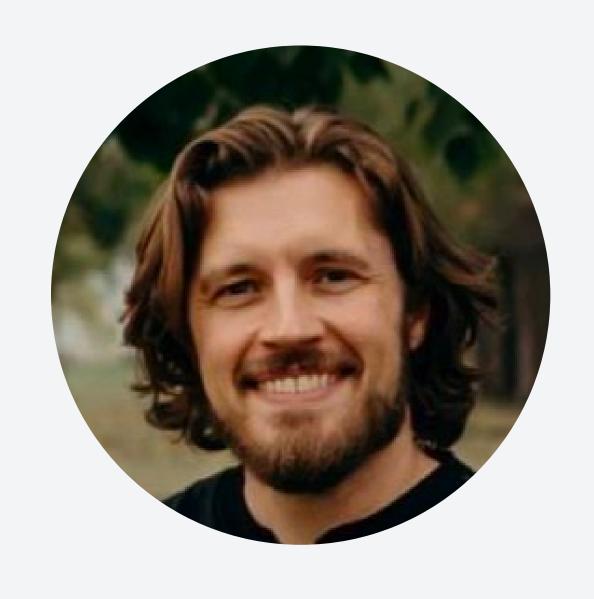
Elevate your career in AI and data science with our hands-on course. Master Python, R, and advanced analytics to tackle real-world challenges like predicting employee attrition. Gain expertise from industry leaders and unlock lucrative opportunities in the dynamic field of data-driven decision-making.



Additional Features

Our course goes beyond mastering Python, R, and advanced analytics. Enjoy personalized mentorship, immersive projects, and access to a dynamic online platform. Stay ahead with exclusive guest lectures and workshops, ensuring you're at the forefront of AI and data science trends.

Al Experts



Jason Kellington

Al Expert

As a consultant, trainer, and technical writer with more than 25 years of experience in IT, I specialize in the development and delivery of solutions focused on effective and efficient enterprise IT.



Justin Frébault

Al Expert

I'm a boutique data consultant specializing in data mesh and lakehouse solutions. I've dedicated my career to helping organizations transform their approach to data, moving beyond mere knowledge.



J Tom Kinser

Al Expert

I have over forty years of experience in software development, data engineering, management, and technical training. I am a Microsoft Certified Trainer and a software developer, holding multiple certifications.



Terumi Laskowsky

Al Expert

Country Manager for Global Consulting Services in Japan, Specialties: Information Security (Compliance, Policy, Application, Host, Network)



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