CHARTERED
INSTITUTE OF PROFESSIONAL CERTIFICATIONS

CERTIFIED PREDICTIVE MODELING SPECIALIST™

CPMS™

Fully Accredited By:

Chartered Institute of Professional Certifications

CPD Certification Service

CPMS™
CERTIFIED PREDICTIVE MODELING SPECIALIST ™

PROGRAM OVERVIEW

Predictive modeling plays a vital role in the decision-making process across various industries, providing data-driven insights that enable organizations to make informed decisions and optimize outcomes. **With the advent of advanced statistical tools like R, predictive modeling has become even more efficient and effective**, serving as a cornerstone of contemporary data analysis. As highlighted by a report from IBM, organizations with powerful data modeling techniques are more likely to acquire, retain customers, and achieve profitability, thereby underlining the indispensability of robust predictive modeling in ensuring sustainable success.

Led by **Thanos Petsakos**, an **award-winning data scientist and machine learning expert**, this comprehensive program is specifically designed to equip you with the most effective strategies and latest trends necessary to gain hands-on expertise in predictive modeling using R. You will gain unparalleled insights into **linear and logistic regression models enabling businesses to make informed decisions, plan strategies, and anticipate future trends**. You will learn the skill of identification of intricate patterns and **capturing nonlinear relationships between variables through decision trees**. You will gain a clear understanding of random forests **which enables you to capture complex relationships and interactions** among features, improving the overall predictive performance.

ACCREDITATIONS

CPD CERTIFIED
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Trustpilot
★★★★★
4.8
★★★★⯪

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4.6
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PROGRAM OVERVIEW

In addition, this program will deep dive into **neural networks** which is a fundamental tool in predictive modeling **that offers exceptional capabilities in feature extraction, achieving high accuracy, scalability, and adaptability** enabling breakthroughs in various domains and driving advancements in artificial intelligence and machine learning. You will also learn **time series analysis helping you to identify trends, seasonality, and cyclical patterns**. By the end of the program, you will delve into advanced topics like **ensemble techniques for model improvement and provides insights into model deployment and interpretation**.

Upon completion of the program, participants will attain the **Certified Predictive Modeling Specialist (CPMS™)** designation and acquire a comprehensive understanding of predictive modeling using R. The CPMS™ designation, recognized globally, will not only enhance your credibility and reputation within the field of predictive modeling but also open doors to new career advancement opportunities. As a CPMS™ certificate holder, you will be ideally positioned to leverage predictive modeling for data-driven decision-making, paving the way for organizational success and personal career growth.

ACCREDITATIONS

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★ **Trustpilot**
★★★★★
4.8
★★★★⯪

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KEY SKILLS YOU WILL GAIN
From This Program

R PROGRAMMING
DATA ANALYSIS
REGRESSION MODEL
EXPLORATORY DATA ANALYSIS

ANALYTICAL THINKING
DEEP LEARNING
DATA MODELING
ARTIFICIAL INTELLIGENCE

STATISTICAL INFERENCE
DATA SCIENCE
DATA VISUALIZATION
PREDICTIVE MODELING

RANDOM FORESTS
CLUSTERING ALGORITHMS
BIAS-VARIANCE TRADEOFF
CROSS-VALIDATION
SUPPORTING VECTOR MACHINES

NAÏVE BAYES MODELING
DECISION TREE MODELING

Thanos Petsakos

Award-Winning Data Science & Machine Learning Expert

Thanos Petsakos is an award-winning presenter, renowned for his expertise in the fields of data science and machine learning. With a rich background as a **data scientist in prominent Fortune 500 companies such as Ernst & Young**, Thanos has honed his skills and acquired extensive experience in **delivering impactful data-driven solutions**. His profound knowledge and ability to effectively present complex concepts have made him a **sought-after guest speaker** at prestigious seminars and conferences around the globe. Notably, he was bestowed with the **Best Presenter title at the DSIT 2021 conference in Shanghai, China**, solidifying his reputation as an exceptional presenter.

In addition, Thanos shares his expertise as a **distinguished instructor in influential universities across Europe and renowned institutions worldwide**. He has also contributed significantly to the field through his **authorship of numerous articles and co-authorship of books dedicated to advancing the field of data science**. Thanos Petsakos's impressive career trajectory, profound expertise, and remarkable contributions continue to shape and inspire the field, solidifying his status as a leading expert in the industry.

OUR PARTICIPANTS

Over 70% of FORTUNE 500 Companies Have Attended Our Accredited Programs Before

PROGRAM AGENDA

MODULE 1 - INTRODUCTION TO PREDICTIVE MODELING

Introduction to Predictive Modeling
Lesson 1 - What is Predictive Modeling?
Lesson 2 - Applications of Predictive Modeling
Lesson 3 - Overview of the Data Science Process

MODULE 2 - DATA PREPARATION FOR PREDICTIVE MODELING

Introduction to 'Data Preparation for Predictive Modeling'
Lesson 1 - Getting Started
Lesson 2 - Data Cleaning and Pre-Processing - Part 1
Lesson 2 - Data Cleaning and Pre-Processing - Part 2
Lesson 2 - Data Cleaning and Pre-Processing - Part 3
Lesson 2 - Data Cleaning and Pre-Processing - Part 4
Lesson 3 - Exploratory Data Analysis
Lesson 4 - Feature Selection and Engineering - Part 1
Lesson 4 - Feature Selection and Engineering - Part 2

MODULE 3 - LINEAR REGRESSION

Introduction to 'Linear Regression'
Lesson 1 - Understanding the Concepts of Linear Regression
Lesson 2 - Building Linear Regression Models in R - Part 1
Lesson 2 - Building Linear Regression Models in R - Part 2
Lesson 3 - Evaluating the Accuracy of Linear Regression Models

MODULE 4 - LOGISTIC REGRESSION

Introduction to 'Logistic Regression'
Lesson 1 - Understanding the Concepts of Logistic Regression
Lesson 2 - Building Logistic Regression Models in R - Part 1
Lesson 2 - Building Logistic Regression Models in R - Part 2
Lesson 2 - Building Logistic Regression Models in R - Part 3
Lesson 3 - Evaluating the Accuracy of Logistic Regression Models

MODULE 5 - DECISION TREES

Introduction to Decision Trees
Lesson 1 - Understanding the Concepts of Decision Trees
Lesson 2 - Building Decision Tree Models in R - Part 1
Lesson 2 - Building Decision Tree Models in R - Part 2
Lesson 2 - Building Decision Tree Models in R - Part 3
Lesson 2 - Building Decision Tree Models in R - Part 4

MODULE 6 - RANDOM FORESTS

Introduction to Random Forests
Lesson 1 - Understanding the Concepts of Random Forests
Lesson 2 - Building Random Forest Models in R - Part 1
Lesson 2 - Building Random Forest Models in R - Part 2

PROGRAM AGENDA

Lesson 2 - Building Random Forest Models in R - Part 3

MODULE 7 - SUPPORT VECTOR MACHINES

Introduction to Support Vector Machines
Lesson 1 - Understanding the Concepts of Support Vector Machines
Lesson 2 - Building Support Vector Machines in R - Part 1
Lesson 2 - Building Support Vector Machines in R - Part 2
Lesson 2 - Building Support Vector Machines in R - Part 3

MODULE 8 - NEURAL NETWORKS

Introduction to Neural Networks
Lesson 1 - Understanding the Concepts of Neural Networks
Lesson 2 - Building a Neural Network Model in R - Part 1
Lesson 2 - Building a Neural Network Model in R - Part 2

MODULE 9 - TIME SERIES ANALYSIS

Introduction to Time Series Analysis
Lesson 1 - Understanding the Concepts of Time Series Analysis - Part 1
Lesson 1 - Understanding the Concepts of Time Series Analysis - Part 2
Lesson 2 - Building and Evaluating Time Series Models in R - Part 1

Lesson 2 - Building and Evaluating Time Series Models in R - Part 2
Lesson 2 - Building and Evaluating Time Series Models in R - Part 3

MODULE 10 - CASE STUDIES AND ANALYSIS

Introduction to Case Studies
Case Study 1 - Netflix
Case Study 2 - Airbnb
Case Study 3 - Zillow
Case Study 4 - Lending Club
Case Study 5 - Google

MODULE 11 - ETHICS AND INTERPRETABILITY IN PREDICTIVE MODELING

Introduction to Ethics and Interpretability in Predictive Modeling
Lesson 1 - Ethical Considerations in Predictive Modeling

EXAMINATION

YOUR CHARTER DESIGNATION

By the vested power in the Board of Governors of Chartered Institute of Professional Certifications, the Advisory Board, Faculty and Curriculum Committee, do hereby certify

Juliana Silva

Has Been Conferred the Designation of

Certified Predictive Modeling Specialist ™ CPMS ™

Has satisfied all the examination and experience requirements, and is duly admitted and licensed to use this charter, board certificate, and membership credentials
And has committed to abide by the membership declaration of ethics, rules of professional conduct and continuing education requirements as a member of Chartered Institute of Professional Certifications

Chair of the Board

CPMS™
CERTIFIED
PREDICTIVE MODELING
SPECIALIST ™

Director

Chartered Institute of Professional Certification's programs are unique as they provide you with professional charter designation and mark that can be used across your lifetime once your have completed our programs.

Upon completing the program and passing the exam, you will receive the prestigious **Certified Predictive Modeling Specialist (CPMS™)** designation. Developed by the esteemed **Chartered Institute of Professional Certifications**, a leading authority in professional certifications, this industry-recognized trademarked charter distinguishes your expertise in **predictive modeling using R techniques to scale your business to greater heights through data-driven decisions**. The program's content has been independently accredited and certified by **CPD,** ensuring that it meets the highest standards in continuing professional development. This distinguished designation will not only elevate your credibility but also enhance your marketability to potential employers or clients, making you stand out as a highly skilled and knowledgeable marketing professional.

ABOUT US

49,525 Business Leaders Have Attained Their Chartered Certifications Since 2009

390 Certified and Fully Accredited Programs

87% Chartered Leaders Have Reported Career Promotions and Enhancements

Chartered Institute of Professional Certifications

All of Chartered Institute of Professional Certifications programs are fully accredited programs. The professional charters and designations are trademarked credentials that can only be used by professionals who have completed and passed our accredited program. It is also independently accredited by CPD as adhering to the highest standards of continuing professional principles.

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OUR FACULTY DIRECTORS

We Collaborate With Instructors From Renowned Institutions

HARVARD UNIVERSITY

Wharton UNIVERSITY *of* PENNSYLVANIA

Stanford University

UNIVERSITY OF MICHIGAN

LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Columbia Business School

London Business School

CONTACT US TODAY

We Thank You for Your Ongoing Support of Our Programs

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