

CHARTERED 
INSTITUTE OF PROFESSIONAL CERTIFICATIONS

CERTIFIED TEXT MINING AND NATURAL LANGUAGE PROCESSING (NLP)

**Fully Accredited
By:**

Chartered Institute of
Professional Certifications

CPD
Certification Service

PROGRAM OVERVIEW



With the exponential growth of digital content, there is an urgent need to extract meaningful insights from vast amounts of unstructured text data. According to IBM, **80% of all data is unstructured text**. Text mining and natural language processing will allow data scientists and researchers to extract insights from huge amounts of text data. From gauging customer sentiment to predicting economic trends, text mining and natural language processing (NLP) have become indispensable in streamlining decisions and strategy.

This certified program will equip you with an in-depth expertise in leveraging text mining and NLP techniques to transform textual data into strategic business assets. Combining theoretical concepts with hands-on applications, you will learn how to **rapidly transform unstructured text data into structured formats and analyze them**. Participants will master essential skills including **preprocessing text data, applying advanced machine learning algorithms, building predictive models, and interpreting and evaluating results**.

Throughout the program, you will also gain first-hand experience carrying out common NLP tasks such as **sentiment analysis, topic modeling, document summarization, named entity recognition, intent detection, and more**. Participants will further learn best practices for building robust pipelines, tuning hyperparameters, and assessing model performance.

ACCREDITATIONS



4.8



4.6



PROGRAM OVERVIEW



With guidance from industry experts, participants will also tackle real-world challenges in analyzing large-scale datasets across diverse domains using Python. Additionally, you will explore deep learning concepts such as **Recurring Neural Network (RNN) and Long Short-Term Memory (LSTMs), Large Language Models (LLMs) and transformers** to solve complex business challenges.

Upon successfully completing the program, you will be awarded the **Certification in Text Mining and Natural Language Processing (NLP)**. This certification will augment your professional credentials, underscore your expertise in text mining and NLP and your ability to conduct thorough, insightful linguistic analysis. With global recognition and lifelong validity, this certification will serve as an ongoing testament to your commitment and proficiency in the dynamic and ever-important field of text mining and natural language processing.

ACCREDITATIONS



4.8



4.6



KEY SKILLS YOU WILL GAIN

From This Program



TEXT MINING
NATURAL LANGUAGE PROCESSING (NLP)
PYTHON PROGRAMMING
TEXT PREPROCESSING

TEXT FEATURE EXTRACTION AND REPRESENTATION
STATISTICAL TEXT MINING TECHNIQUES
TOPIC MODELLING

TERM FREQUENCY (TF)
INVERSE DOCUMENT FREQUENCY (IDF)
TEXTUAL DATA VISUALIZATION
BAG OF WORDS (BOW)

DEEP LEARNING
MACHINE LEARNING MODELS
SENTIMENT ANALYSIS
NAMED ENTITY RECOGNITION
RECURRENT NEURAL NETWORKS

TRANSFORMERS
SEQUENCE TO SEQUENCE MODELS

YOUR FACULTY DIRECTOR



Michael Wang, CFA

LinkedIn Top Voice - AI & Deep Learning Expert

Michael Wang, CFA, stands at the forefront of the data science and artificial intelligence landscape. As a **recognized LinkedIn Top Voice in AI & Deep Learning**, Michael brings over a decade of diverse experience spanning institutional investing, consulting, hedge funds, fintech, and data science. His expertise in predictive analytics, financial time series, deep learning, NLP, and data visualization is widely acknowledged. Michael has imparted his knowledge in **AI as a lecturer at the University of Sydney and currently spearheads a data science team** at a leading tech company.

His insights extend beyond the professional sphere; he writes for the largest data science publication on Medium and **features regularly as a top writer in AI, Technology and Business**. Michael's multifaceted career demonstrates a blend of technical proficiency and thought leadership in the evolving world of AI and data science.

OUR PARTICIPANTS

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



Goldman Sachs



SAMSUNG



ExxonMobil



BURBERRY



citi



IKEA



VOLVO



HYUNDAI



Pfizer

Life is our life's work



Nestlé

PROGRAM AGENDA

MODULE 1 - INTRODUCTION TO TEXT ANALYTICS AND NATURAL LANGUAGE PROCESSING (NLP)

- Introduction to Text Analytics and Natural Language Processing (NLP)
- Lesson 1 - What is Text Mining and NLP?
- Lesson 2 - Application and Use Cases
- Lesson 3 - Overview of NLP - Part 1
- Lesson 3 - Overview of NLP - Part 2

MODULE 2 - TEXT PRE-PROCESSING

- Introduction to Text Pre-Processing
- Lesson 1 - Text Pre-Processing
- Lesson 2 - Introduction to Python - Part 1
- Lesson 2 - Introduction to Python - Part 2
- Lesson 3 - Text Processing with Python

MODULE 3 - FEATURE EXTRACTION

- Introduction to Feature Extraction
- Lesson 1 - Feature Extraction – BOW
- Lesson 2 - Feature Extraction – TF-IDF
- Lesson 3 - Word Embeddings
- Lesson 4 - Case Study 1

MODULE 4 - MACHINE LEARNING WITH NLP

- Overview - Machine Learning with NLP
- Lesson 1 - Introduction to Machine Learning - Part 1
- Lesson 1 - Introduction to Machine Learning - Part 2
- Lesson 2 - Machine Learning with NLP
- Lesson 3 - Case Study 2

MODULE 5 - UNSUPERVISED LEARNING

- Introduction to Unsupervised Learning
- Lesson 1 - Unsupervised Learning
- Lesson 2 - Principal Component Analysis
- Lesson 3 - Clustering Algorithms
- Lesson 4 - Text Summarization

MODULE 6 - ADVANCED LANGUAGE PROCESSING WITH NLP TECHNIQUES

- Introduction to Advanced Language Processing with NLP Techniques
- Lesson 1 - Parts of Speech Tagging
- Lesson 2 - Named Entity Recognition
- Lesson 3 - Sentiment Analysis
- Lesson 4 - Topic Mining
- Lesson 5 - Case Study 3

PROGRAM AGENDA

MODULE 7 - DEEP LEARNING

- Introduction to Deep Learning
- Lesson 1 - Overview of Deep Learning
- Lesson 2 - Deep Learning Fundamentals - Part 1
- Lesson 3 - Deep Learning Fundamentals - Part 2
- Lesson 4 - Deep Learning Fundamentals - Part 3
- Lesson 5 - Deep Learning with NLP

MODULE 8 - ARCHITECTURES WITHIN DEEP LEARNING

- Introduction to Architectures Within Deep Learning
- Lesson 1 - Recurrent Neural Networks
- Lesson 2 - Long Short-Term Memory
- Lesson 3 - Transformers and Attention
- Lesson 4 - Case Study 4

MODULE 9 - LARGE LANGUAGE MODELS

- Introduction to Large Language Models
- Lesson 1 - Intro to Large Language Models
- Lesson 2 - Setting up ChatGPT
- Lesson 3 - Applications of ChatGPT for NLP
- Lesson 4 - Prompting LLMs Effectively
- Lesson 5 - Advanced Usage

MODULE 10 - EVALUATION AND INTERPRETATION OF NLP MODELS AND TECHNIQUES

- Introduction to Evaluation and Interpretation of NLP Models and Techniques
- Lesson 1 - Evaluating Text Mining & NLP
- Lesson 2 - Model Interpretability
- Lesson 3 - Framework for Approaching Problems
- Lesson 4 - Final Recap

FINAL EXAM

Congratulations

YOUR CHARTER DESIGNATION



Upon completing the program and passing the exam, you will receive the prestigious **Certification in Text Mining and Natural Language Processing (NLP)**. This distinguished certification will establish you as a recognized expert in applying effective text mining and NLP techniques for research analysis. It not only elevates your professional credibility but also enhances your marketability to potential employers or clients, making you stand out as a highly skilled and knowledgeable research analyst.

Developed by the esteemed **Chartered Institute of Professional Certifications**, the certification is a highly regarded industry-recognized certificate that signifies excellence in the area of robust research analysis. In addition, the program content has been independently accredited and certified by **CPD**, ensuring that it meets the highest standards in continuing professional development.

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.

CHARTERED 
INSTITUTE OF PROFESSIONAL CERTIFICATIONS



OUR FACULTY DIRECTORS

We Collaborate With
Instructors From
Renowned Institutions



HARVARD
UNIVERSITY



Wharton
UNIVERSITY of PENNSYLVANIA



Stanford University



UNIVERSITY OF MICHIGAN



**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

Singapore and Asia Pacific Enquiries

Email: advisor@charteredcertifications.com
Phone: +65 6716 9980
Address: Chartered Institute of Professional Certifications
1 Gateway Drive
#20-04 Westgate Tower
Singapore 608531

Australia and New Zealand Enquiries

Email: advisor@charteredcertifications.com
Phone: +61 3 9909 7310
Address: Chartered Institute of Professional Certifications
530 Little Collins Street, Level 1
Melbourne VIC 3000, Australia

UK, Europe and Middle East Enquiries

Email: advisor@charteredcertifications.com
Phone: +44 (020) 335 57898
Address: Chartered Institute of Professional Certifications
86-90 Paul Street
London, EC2A 4NE

USA Enquiries

Email: advisor@charteredcertifications.com
Phone: +1 888 745 8875
Address: Chartered Institute of Professional Certifications
99 Wall Street #3936
New York, NY 10005