



## COURSE OVERVIEW AI0145

### Certified Artificial Intelligence Practitioner (CAIP)

(CertNexus-CAIP Exam Preparation Training)

#### Course Title

Certified Artificial Intelligence Practitioner  
(CAIP) (CertNexus-CAIP Exam  
Preparation Training)

#### Course Date/Venue

December 22-26, 2025/Ajman Meeting  
Room, Khalidia Palace Hotel Dubai by  
Mourouj Gloria, Dubai, UAE

#### Course Reference

AI0145

#### Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



#### Course Description



***This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.***



This course is designed to provide participants with a detailed and up-to-date overview of Certified Artificial Intelligence Practitioner (CAIP). It covers the AI and ML fundamentals, ML workflow and quality considerations; using orange data mining to import data, explore data, data quality checks and preprocessing; the classification models, regression models, clustering and dimensionality reduction (PCA); and the evaluation metrics and how business units interpret model outputs.



Further, the course will also discuss the decision trees, random forests and SVM (high-level concept only); when to select which model, overfitting and underfitting risks and hyperparameters; evaluating AI vendors/models, model limitations and translating ML results for decision-makers; the feature selection and transformation, data quality impact on accuracy, IT quality and control perspective.



During this interactive course, participants will learn the model deployment, HR scoring, customer service routing, sales forecasting and fraud detection; the GenAI differs from classical ML, including capabilities, limitations and prompt engineering basics; and the retrieval-augmented generation (RAG), task planning, memory and AI governance.

### **Course Objectives**

Upon the successful completion of this course, each participant will be able to:-

- Get prepared for the next CAIP Exam and have enough knowledge and skills to pass such exam in order to get the Certified Artificial Intelligence Practitioner (CAIP) from CertNexus
- Discuss AI and ML fundamentals, ML workflow and quality considerations
- Use orange data mining to import data, explore data, data quality checks and preprocessing
- Illustrate classification models, regression models, clustering, dimensionality reduction (PCA), evaluation metrics and how business units interpret model outputs
- Discuss decision trees, random forests, SVM (high-level concept only), when to select which model, overfitting and underfitting risks and hyperparameters
- Evaluate AI vendors/models, identify model limitations and translate ML results for decision-makers
- Apply feature selection and transformation, and discuss data quality impact on accuracy and IT quality and control perspective
- Recognize model deployment, and apply HR scoring, customer service routing, sales forecasting and fraud detection
- Explain how GenAI differs from classical ML including capabilities and limitations and prompt engineering basics
- Discuss retrieval-augmented generation (RAG), task planning, memory and AI governance

### **Exclusive Smart Training Kit - H-STK®**



*Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

### **Who Should Attend**

This course provides an overview of all significant aspects and considerations of artificial intelligence for business solutions heads, technology solutions managers, IT quality and control managers, IT professionals and software developers, data analysts and data scientists, business leaders and project managers, risk, compliance and other technical staff.



### CertNexus-CAIP Certificate(s)

- (1) CertNexus-CAIP certificates will be issued to participants who successfully passed the CertNexus-CAIP exam.




- (2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course






### Certificate Accreditations

Haward's certificates are accredited by the following international accreditation organizations:

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

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The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

### Training Fee

**US\$ 5,500** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

### Exam Fee

**US\$ 490** per Delegate + **VAT**.

### Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



**Dr. Hazim Ibrahim**, PhD, MSc, MBA, BSc, CAIP, is a **Senior IT Specialist** with over **30 years** of extensive experience. His expertise widely covers **Artificial Intelligence, Digitalization, Digital Transformation** Strategy & Implementation, **VMware Virtualization** (ESXi, vCenter, vGPU, VCF), **IT Maintenance**, Say2000i, IP Phone, National Address & ID Automation, **Electricity Distribution Network, Customs Network & Maintenance, LAN & WAN Network, UYAP Network, Network Routing Protocols, Multicast Protocols, Network Management Protocols, Microsoft Enterprise Systems, Microsoft Servers, Microsoft Hyper-V, Microsoft Exchange, Microsoft 365 Cloud Services** (Exchange Online, Teams, OneDrive), **Microsoft Azure & Hybrid Active Directory** Environments, **VMware Events, VMware ESXi/vCenter, Enterprise Infrastructure & Virtualization, Data Center Infrastructure, Data Center Architecture & Digital Transformation** Projects, Mission-critical IT Systems, **Data Center Design & Management, File Server & Corporate Document** Management, ERP (SAP) & Oracle Database Systems, Oracle OVM, Oracle DB, Active Directory, SAP ERP, VMware vSphere 6.0 Installation & Configuration, Microsoft Windows Server 2012 R2, Microsoft Exchange Server 2012, Red Hat Linux Administration, AutoCAD, GIS ArcView, **WiMAX Broadband Wireless** System, TT Intranet & ADSL Network, TT Web & Voicemail, Off-site ATM Network, **Mobile & Wireless Networks** and **Digital Signal Processing**.

During his career life, Dr. Hazim is worked in significant positions like the **CEO, Chairman of the Board, Managing Director, Non-executive Chairman, Director of Research, Professor & Dean, Chief Scientist, Assistant Scientist, Associate Professor, AI Technology Innovations Advisor, Senior Advisor, Teaching Assistant, IT Consultant** and **Senior Instructor/Trainer** from various companies such as Generabia (FZC), RayaCX, SUMMIT Holding, Adjunct Professor American University, Technology Innovation and Entrepreneurship Center (tieg), Microsoft Corporation, Information Technology Industry Development Agency (ITIDA), ICT Minister for the Technology Development Sector, Faculty of Computers and Information, UAE University, IBM research Center (Arabic NLP) and Department of Systems & Biomedical Engineering.

Dr. Hazim has a **PhD in Applied Pattern Recognition** and **Artificial Intelligence**, a **Master's of Business Administration in Finance**, a **Master's** degree in **Applied Mathematics** and a **Bachelor's** degree in **Systems Engineering**. Further, he is a **Certified Instructor/Trainer**, a Certified Artificial Intelligence Practitioner (**CAIP**) and a **Verified Data Science Professional (DAT102x)**. He has further presented and published various awards and journals and delivered numerous training courses and workshops internationally.



### Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

### Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

### Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

#### **Day 1: Monday, 22<sup>th</sup> December 2025**

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	<b>PRE-TEST</b>
0830 – 0915	<b>AI &amp; ML Fundamentals for Business Leaders</b> What ML is, What Problems it Solves • ML versus Traditional Programming • Supervised versus Unsupervised
0915 – 0930	Break
0930 – 1030	<b>AI &amp; ML Fundamentals for Business Leaders (cont'd)</b> Business Use Cases in: Telco, Banking, HR, Operations • Data Hierarchy & Data Maturity • How Business Teams Identify Valuable AI Opportunities
1030 – 1130	<b>ML Workflow &amp; Quality Considerations</b> Full ML Pipeline: Data → Prepare → Model → Evaluate → Deploy • Concept Drift & Data Drift • ML Risks & Typical Failure Modes
1130 – 1215	<b>ML Workflow &amp; Quality Considerations (cont'd)</b> Train/Validate/Test Explained in Business Language • Model Auditability, Reliability, and Governance • Business KPIs Affected by AI
1215 – 1230	Break
1230 – 1330	<b>Hands-on EDA &amp; Data Exploration (No Code) Using Orange Data Mining</b> Import Data • Explore Data: Distributions, Outliers, Correlations • Data Quality Checks (IT Quality & Control Relevance)
1330 – 1420	<b>Hands-on EDA &amp; Data Exploration (No Code) Using Orange Data Mining (cont'd)</b> Preprocessing: Missing Values, Encoding, Normalization • Visual Storytelling for Stakeholders
1420 – 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One



**Day 2: Tuesday, 23<sup>th</sup> December 2025**

0730 – 0830	<b>Core ML Models (Hands-on) Using Orange</b> Classification Models (Logistic Regression, k-NN) • Regression Models (Linear Regression) • Clustering (k-Means)
0830 - 0930	<b>Core ML Models (Hands-on) Using Orange (cont'd)</b> Dimensionality Reduction (PCA) • Evaluation Metrics: Accuracy, F1, ROC, MSE • How Business Units Interpret Model Outputs
0930 – 0945	Break
0945 – 1100	<b>Advanced ML Models (Executive-Level)</b> Decision Trees, Random Forests • SVM (High-Level Concept Only) • When to Select Which Model
1100 – 1215	<b>Advanced ML Models (Executive-Level) (cont'd)</b> Risks: Overfitting, Underfitting • Hyperparameters (Intuitive, Non-Math)
1215 – 1230	Break
1230 – 1330	<b>Business Alignment &amp; Practical Case Studies</b> How to Evaluate AI Vendors/Models • Understanding Model Limitations • Translating ML Results for Decision-Makers
1330 – 1420	<b>Business Alignment &amp; Practical Case Studies (cont'd)</b> Business Case Workshop: “Which ML Model Fits this Business Problem?” • AI Project Lifecycle Governance
1420 – 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two

**Day 3: Wednesday, 24<sup>th</sup> December 2025**

0730 – 0830	<b>Feature Engineering &amp; Model Improvement</b> Feature Selection & Transformation • Data Quality Impact on Accuracy • Hands-on: Feature Engineering in Orange
0830 – 0930	<b>Feature Engineering &amp; Model Improvement (cont'd)</b> IT Quality & Control Perspective: Reproducibility, Auditing Features, Versioning Data
0930 – 0945	Break
0945 – 1045	<b>Deployment &amp; MLOps (High-Level)</b> What is Model Deployment? • APIs, Microservices, Batch versus Real-Time • Cloud versus On-Prem
1045 – 1145	<b>Deployment &amp; MLOps (High-Level) (cont'd)</b> Monitoring, Performance KPIs • Containerization → Dockers → Kubernetes Key Concepts
1145 – 1200	Break
1200 – 1300	<b>Classical AI Use-Case Design Workshop: Teams Design an AI Solution for</b> HR Scoring • Customer Service Routing • Sales Forecasting • Fraud Detection • Telco Churn





1300 – 1420	<b>Classical AI Use-Case Design Workshop: Teams Design an AI Solution for (cont'd)</b> Output: Problem Definition → Data Needs → ML Model → Evaluation → Deployment Plan
1420 – 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three

**Day 4: Thursday, 25<sup>th</sup> December 2025**

0730 – 0830	<b>Generative AI &amp; Prompt Engineering</b> How GenAI Differs from Classical ML • Capabilities & Limitations • Prompt Engineering Basics
0830 – 0930	<b>Generative AI &amp; Prompt Engineering (cont'd)</b> How Leaders Evaluate GenAI Output Quality • LLM Risks: Hallucination, Bias, Leakage
0930 – 0945	Break
0945 – 1045	<b>Understanding Transformers &amp; LLMs (Executive-Level)</b> Why LSTM → Transformers • Attention Explained Simply • Tokens, Embeddings, Context Windows • Zero-Shot, Few-Shot Reasoning • LLM Evaluation Metrics
1045 – 1145	<b>Understanding Transformers &amp; LLMs (Executive-Level) (cont'd)</b> Enterprise Model Landscape: GPT-4o/5.1 • Llama 3.x • Qwen, Mistral • Falcon Arabic • Open-Source versus Closed-Source
1145 – 1200	Break
1200 – 1300	<b>GenAI Hands-on (No Code): LLMs for</b> Summarization • Extraction • Document Q&A • Email Automation
1300 – 1420	<b>GenAI Hands-on (No Code): LLMs for (cont'd)</b> Policy Rewriting • Ideation & Drafting • Speech-to-Text & Text-to-Speech Demos
1420 – 1430	<b>Recap</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Four

**Day 5: Friday, 26<sup>th</sup> December 2025**

0730 – 0830	<b>Retrieval-Augmented Generation (RAG)</b> Why Grounding is Necessary • How RAG Works (Architecture-Level) • Indexing → Embeddings → Chunking → Retrieval
0830 – 0930	<b>Retrieval-Augmented Generation (RAG) (cont'd)</b> When RAG is Better than Fine-Tuning • Enterprise Document Workflows • Demo: Internal Document Q&A
0930 – 0945	Break
0945 – 1045	<b>AI Agents, Automation &amp; Governance</b> Agent Workflows • Task Planning, Tool Use, Memory • Use Cases: Customer Support, HR Processing, Process Automation, Analytics
1045 – 1145	<b>AI Governance for Leaders</b> Privacy, GDPR • Data Residency • Risk Assessment • Safe Deployment Policies • Vendor Assessment Frameworks





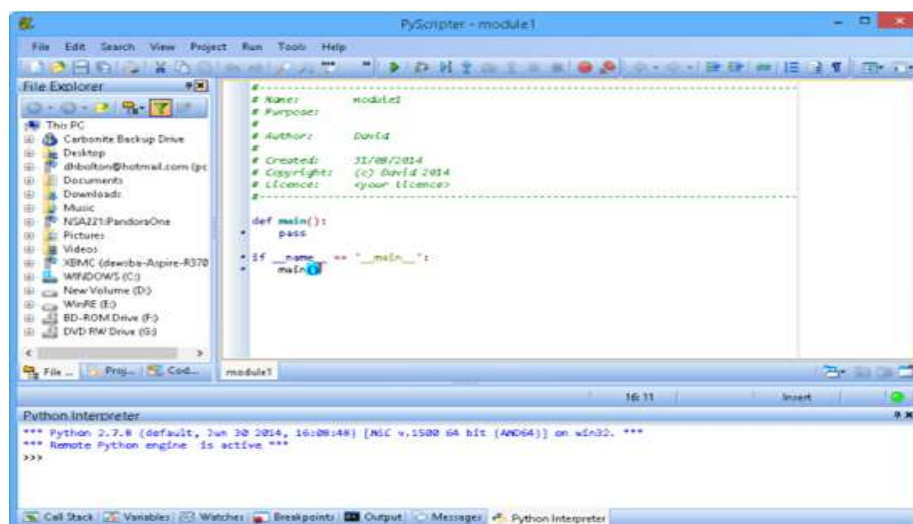
1145 – 1200	Break
1200 – 1300	<b>Final Capstone &amp; Presentations</b> Teams Present a Combined ML + GenAI Solution: Business Problem • Data Sources • ML Workflow (Orange Output)
1300 - 1345	<b>Final Capstone &amp; Presentations (cont'd)</b> GenAI Workflow (LLM/RAG) • Architecture Overview
1345 – 1400	<b>Course Conclusion</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1400 – 1415	<b>POST-TEST</b>
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

### **MOCK Exam**

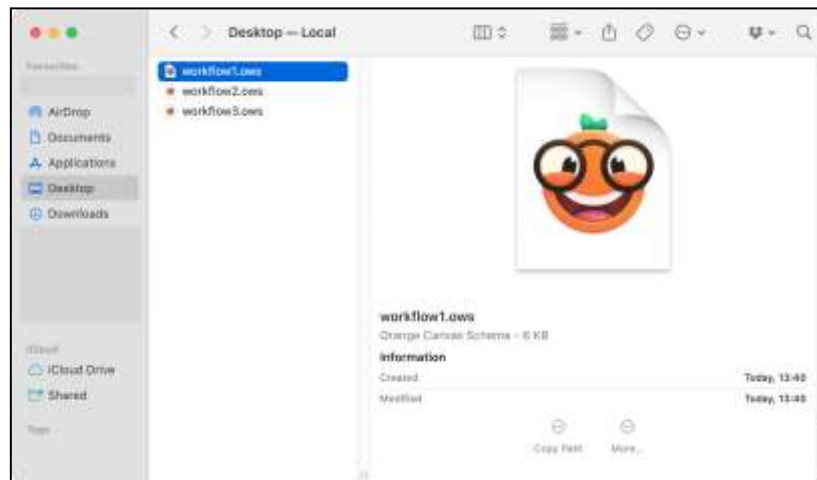
Upon the completion of the course, participants have to sit for a MOCK Examination similar to the exam of the Certification Body through Haward's Portal. Each participant will be given a username and password to log in Haward's Portal for the MOCK Exam during the 60 days following the course completion. Each participant has only one trial for the MOCK exam within this 60-day examination window. Hence, you have to prepare yourself very well before starting your MOCK exam as this exam is a simulation to the one of the Certification Body.

### **Simulator (Hands-on Practical Sessions)**

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using "PyScripter with Python" and "Orange Datamining".



**PyScripter with Python**



### Orange Datamining

#### Course Coordinator

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