

COURSE OVERVIEW PM0054 Artificial Intelligence Projects

Course Title

Artificial Intelligence Projects

Course Date/Venue

Session 1: June 22-26, 2025/Tamra Meeting Room, Al Bandar Rotana Creek, Dubai

Session 2: November 03-07, 2025/Glasshouse Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE



Course Reference

PM0054

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Objectives





This hands-on, highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series interactive small groups class workshops.

This course is designed to provide participants with a detailed and up-to-date overview of Artificial Intelligence Projects. It covers the data collection, preprocessing, model training and deployment; the challenges in Al projects and how to overcome them; selecting the right Al project and data collection and preprocessing for Al projects; choosing the right Al model for the project; the Al project development tools and frameworks; the object detection and image classification; and the for facial recognition, medical autonomous vehicles, agriculture and satellite image analysis.

will also discuss Further. the course the implementation of chatbot using NLP libraries and using transformer models for chatbots; sentiment analysis in text, training AI models to detect emotions in tweets and reviews and using LSTMs and transformers for sentiment prediction; implementing text summarization using transformer models; the applications in journalism document summarization; and evaluating model performance using NLP metrics.

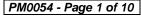






















During this interactive course, participants will learn the conversion of speech to text using deep learning, building a voice assistant using AI and implementing text-tospeech (TTS) models; training Al models for language translation and using transformers for multilingual text processing; the AI for fraud detection in banking, stock market prediction, cybersecurity and intrusion detection, business analytics and customer insights; the Al-driven traffic monitoring and optimization and Al-powered energy management systems; deploying AI models in production and AI in edge computing and IoT devices; the bias in Al models, techniques for reducing bias in Al applications and Al regulations and compliance frameworks; and the Al-powered automation and robotics, quantum computing in Al, Al and augmented reality (AR) and breakthroughs in selflearning AI models.

Course Objectives

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

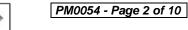
- Apply and gain an in-depth knowledge on artificial intelligence projects
- Carryout data collection, preprocessing, model training and deployment and identify the challenges in AI projects and how to overcome them
- Select the right AI project and apply data collection and preprocessing for AI projects
- Choose the right Al model for the project and perform Al project development tools and frameworks
- Carryout object detection and image classification including AI for facial recognition, Al for medical imaging, Al for autonomous vehicles and Al in agriculture and satellite image analysis
- Implement a chatbot using NLP libraries and use transformer models for chatbots
- Apply sentiment analysis in text, train AI models to detect emotions in tweets and reviews and use LSTMs and transformers for sentiment prediction
- Implement text summarization using transformer models and its applications in journalism and document summarization as well as evaluate model performance using NLP metrics
- Convert speech to text using deep learning, build a voice assistant using AI and implement text-to-speech (TTS) models
- Train AI models for language translation and use transformers for multilingual text processing
- Carryout AI for fraud detection in banking, AI for stock market prediction, AI for cybersecurity and intrusion detection and AI for business analytics and customer insights
- Describe Al-driven traffic monitoring and optimization and Al-powered energy management systems
- Deploy AI models in production and apply AI in edge computing and IoT devices
- Recognized bias in Al models, techniques for reducing bias in ai applications and Al regulations and compliance frameworks
- Discuss Al-powered automation and robotics, quantum computing in Al, Al and augmented reality (AR) and breakthroughs in self-learning AI models























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 projects for technical professionals, project and business managers, domain-specific professionals, government and policy makers and other technical staff.

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 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.















Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations:

BAC

British Accreditation Council (BAC)

Haward Technology is accredited by the British Accreditation Council for Independent Further and Higher Education as an International Centre. 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.

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, researchbased 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.











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. Chris Le Roux, PhD, MSc, BSc, PMI-PMP, PMI-CAPM is a Senior Project & Management Consultant with over 30 years of teaching, training and industrial experience. His expertise lies extensively in the areas of Project & Contracts Management Skills, Project & Construction Management, Project Planning, Scheduling & Control, Project Management, Project Delivery & Governance Framework, Project Management Practices, Project Management Disciplines, Project Risk Management, Risk Identification Tools & Techniques, Project Life Cycle, Project Stakeholder & Governance, Project Management Processes,

Project Integration Management, Project Management Plan, Project Work Monitoring & Control, Project Scope Management, Project Time Management, Project Cost Management, Project Quality Management, Quality Assurance, Project Human Resource Management, Project Communications Management, Contract Management, Tender Development, Contract Standards & Laws, Dispute Resolution & Risk Identification, Myers-Briggs Type Indicator (MBTI), Organization Development Consultation, Advanced Debriefing of Emotional Trauma, Interpersonal Motivation, Model Based Interviewing, Leadership Orientation Programme, Coaching & Motivation, Creative Thinking & Problem-Solving Techniques, Emotional Intelligence, Presentation Skills, Communication & Interpersonal Skills, Effective Communication & Influencing Skills, Effective Business Writing Skills, Writing Business Documents, Business Writing (Memo & Report Writing), Leadership & Team Building, Psychology of Leadership, Interpersonal Skills & Teamwork, Coaching & Mentoring, Innovation & Creativity, Office Management & Administration Skills, Controlling Your Time & Managing Stress, Crisis Management, Strategic Human Resources Management, Change Management, Negotiation Skills, Strategic Planning, Risk Analysis & Risk Management, Global Diverse & Virtual Teams Operation, Exceeding Customer Expectations, Corporate Governance Best Practice, Business Performance Management & Improvement, Building Environment of Trust & Commitment, Win-Win Negotiation Strategies, Quality Improvement & Resource Optimization, Neuro Linguistic Programming (NLP), Personal Resilience Developing, Effective Role Modelling & Development, Managing Dynamic Work Environments, Organizational Development, Career Management, Situation & Behaviour Analysis, Interpersonal Motivation Skills, Inventory Management and Financial Administration. Further, he is also well-versed in Water Supply System Security, Vulnerability & Terrorism, Integrated Security Systems, Incident Threat Characterization & Analysis, Physical Security Systems, Security Crisis, Security Emergency Plan, Command & Control System, Preventive Actions and Situation Analysis. He was the **Psychologist** & **Project Manager** wherein he was responsible in the project management and private psychology practices.

During his career life, Dr. Le Roux has gained his academic and field experience through his various significant positions and dedication as the Director, Medico Legal Assessor Psychologist, Training & Development General Manager, Project Manager, Account Manager, Commercial Sales Manager, Manager, Sales Engineer, Project Specialist, Psychology Practitioner, Senior HR Consultant, Senior Lecturer, Senior Consultant/Trainer, Business Consultant, Assistant Chief Education Specialist, ASI Coordinator, Part-time Lecturer/Trainer, PMP & Scrum Trainer, Assessor & Moderator, Team Leader, Departmental Head, Technical Instructor/Qualifying Technician, Apprentice Electrician: Signals and Part-Time Electrician from various companies and universities such as the South African Railway (SAR), Department of Education & Culture, ESKOM, Logistic Technologies (Pty. Ltd), Human Development: Consulting Psychologies (HDCP) & IFS, Mincon, Eagle Support Africa, Sprout Consulting, UKZN, Grev Campus, Classis Seminars, CBM Training, just to name a few.

Dr. Le Roux has a PhD in Commerce Major in Leadership in Performance & Change, a Master's degree in Human Resource Management, a Bachelor's degree (with Honours) in Industrial Psychology, a National Higher Diploma and a National Technical Diploma in Electrical & Mechanical Engineering. Further, he is a Certified Project Management Professional (PMI-PMP), a Certified Associate in Project Management (PMI-CAPM), a Certified Scrum Master Trainer by the VMEdu, a Certified Instructor/Trainer and a Certified Internal Verifier/Assessor/Trainer by the Institute of Leadership & Management (ILM). Moreover, he is a Registered Industrial Psychologist by the Health Professions Council of South Africa (HPCSA), a Registered Educator by the South African Council for Educators (SACE) and a Registered Facilitator, Assessor & Moderator with Education, Training and Development Practices (ETDP) SETA. He has further delivered numerous trainings, courses, seminars, conferences and workshops globally.

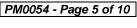






















Course Program

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

Day I	
0730 – 0800	Registration & Coffee
0800 - 0815	Welcome & Introduction
0815 - 0830	PRE-TEST
	Introduction to AI Project Lifecycle
0830 – 0930	Understanding AI Workflows from Ideation to Deployment • Steps in an AI Project: Data Collection, Preprocessing, Model Training & Deployment • Challenges in AI Projects & How to Overcome Them • Case Studies of Successful AI Projects
0930 - 0945	Break
0945 – 1040	Selecting the Right AI Project Identifying the Problem Statement • Choosing the Right AI Technique (ML, DL, NLP, CV) • Setting Up Project Scope & Deliverables • Evaluating Feasibility & Business Impact
1040 - 1135	Data Collection & Preprocessing for AI Projects Understanding Different Data Types (Structured versus Unstructured) • Data Collection Methods & Sources (APIs, Web Scraping, Datasets) • Data Cleaning, Handling Missing Values & Feature Engineering • Data Augmentation Techniques for Deep Learning
1135 - 1230	Choosing the Right AI Model for the Project Overview of Different AI Models (Supervised, Unsupervised, Reinforcement Learning) • Comparing Machine Learning Models (SVM, Decision Trees, Random Forest) • Deep Learning Architectures (CNN, RNN, GAN, Transformers) • Selecting the Best Evaluation Metric for Project Success
1230 – 1245	Break
1245 - 1335	AI Project Development Tools & Frameworks Overview of AI Programming Languages (Python, R) • Introduction to AI Frameworks (TensorFlow, PyTorch, Scikit-Learn) • Using Cloud Platforms for AI Projects (Google Cloud, AWS, Azure) • GitHub & Version Control for AI Projects
1335 - 1420	Hands-On: Setting Up AI Project Environment Installing Necessary Libraries & Dependencies • Setting Up Jupyter Notebook & Google Colab • Using Virtual Environments for AI Development • Running a Simple AI Project Template
1420 – 1430	Recap 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

Day Z	
0730 – 0830	Object Detection & Image Classification Introduction to Image Processing Using OpenCV • Using CNNs for Image Classification • Implementing YOLO & SSD for Object Detection • Training Custom Object Detection Models
0830 – 0900	AI for Facial Recognition Understanding Face Detection versus Face Recognition • Building a Real- Time Facial Recognition System • Emotion Detection Using Deep Learning • Applications in Security & Authentication
0900 - 0915	Break
0915 – 1100	AI for Medical Imaging AI Applications in Diagnosing Diseases from Medical Images • Implementing CNNs for X-ray & MRI Analysis • Transfer Learning for Small Medical Datasets • Ethical Considerations in AI-Based Healthcare
1100 – 1230	AI for Autonomous Vehicles Understanding AI Perception in Self-Driving Cars • Using AI for Lane Detection & Pedestrian Tracking • Implementing AI-Powered Vehicle Classification • Challenges in Real-Time AI Processing for Vehicles
1230 - 1245	Break
1245 – 1335	AI in Agriculture & Satellite Image Analysis AI for Crop Health Monitoring Using Remote Sensing • Soil Classification Using Machine Learning • Detecting Deforestation & Climate Change Patterns • Using AI for Yield Prediction
1335 - 1420	Hands-On Project: Image Processing with AI Building a Real-Time Object Detection System • Collecting & Annotating Datasets for Training • Training & Fine-Tuning a CNN Model • Deploying the Model for Real-Time Applications
1420 – 1430	Recap 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	
	AI-Powered Chatbots & Virtual Assistants
0730 – 0830	Understanding Chatbot Architecture (Rule-Based versus AI-Driven) •
	Implementing a Chatbot Using NLP Libraries (NLTK, SpaCy) • Using
	Transformer Models (BERT, GPT) for Chatbots • Deploying Chatbot APIs
	for Real-World Applications
0830 – 0900	AI for Sentiment Analysis
	Introduction to Sentiment Analysis in Text • Training AI Models to Detect
	Emotions in Tweets & Reviews • Using LSTMs & Transformers for
	Sentiment Prediction • Real-World Applications in Brand Monitoring &
	Social Media
0900 - 0915	Break
0915 – 1100	AI for Text Summarization
	Extractive versus Abstractive Summarization • Implementing Text
	Summarization Using Transformer Models • Applications in Journalism &
	Document Summarization • Evaluating Model Performance Using NLP
	Metrics

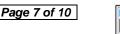






















1100 – 1230	AI for Speech-To-Text & Text-To-Speech
	Converting Speech to Text Using Deep Learning • Building a Voice
	Assistant Using AI • Implementing Text-To-Speech (TTS) Models •
	Applications in Accessibility & Voice-Enabled Systems
1230 - 1245	Break
1245 - 1335	AI for Machine Translation
	Introduction to Neural Machine Translation • Training AI Models for
	Language Translation • Using Transformers for Multilingual Text
	Processing • Applications in Cross-Border Communication
1335 - 1420	Hands-On Project: Building an AI Chatbot
	Collecting Conversational Datasets for Chatbot Training • Implementing an
	AI-Powered Chatbot Using RNN/LSTMs • Deploying the Chatbot as a Web-
	Based or Mobile App • Evaluating Chatbot Performance Using NLP Metrics
1420 – 1430	Recap
	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

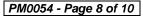
Day 4	
0730 – 0830	AI for Fraud Detection in Banking Identifying Fraudulent Transactions Using AI • Implementing Anomaly Detection Algorithms • Using AI for Risk Assessment in Financial Services • Case Studies of AI Fraud Prevention Systems
0830 - 0930	AI for Stock Market Prediction Using Deep Learning for Financial Time-Series Forecasting • Implementing LSTMs & RNNs for Stock Price Prediction • Sentiment Analysis for Market Trends • Challenges in AI-Based Financial Forecasting
0930 - 0945	Break
0945 – 1100	AI for Cybersecurity & Intrusion Detection AI-Driven Threat Detection Systems • Implementing Deep Learning for Intrusion Detection • Using AI to Prevent Phishing & Malware Attacks • Ethical Considerations in AI-Powered Security Systems
1100 – 1215	AI for Business Analytics & Customer Insights Understanding AI-Driven Market Analysis • Predicting Customer Behavior Using Machine Learning • Using AI for Recommendation Systems • Real- World Case Studies in AI-Driven Business Intelligence
1215 - 1230	Break
1245 – 1335	AI in Smart Cities & Iot AI-Driven Traffic Monitoring & Optimization • AI-Powered Energy Management Systems • Smart Surveillance Systems Using AI • AI Applications in Disaster Management
1335 - 1420	Hands-On Project: AI for Predictive Analytics Choosing the Right Dataset for Predictive Modeling • Implementing Machine Learning Models for Forecasting • Deploying the Model in a Business Setting • Evaluating AI Model Performance
1420 - 1430	Recap 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	
0730 - 0830	Deploying AI Models in Production
	Choosing the Right Deployment Environment (Cloud, Edge, API) • Model
	Conversion Techniques (TensorFlow Lite, ONNX) • Deploying AI Models
	Using Flask/Django • Monitoring AI Models in Real-Time
	AI in Edge Computing & IoT Devices
0830 - 0930	Running AI Models on Raspberry Pi & Jetson Nano • Optimizing AI Models
0030 - 0330	for Low-Power Devices • AI Applications in Embedded Systems • Real-
	World Examples of AI in Edge Computing
0930 - 0945	Break
	AI Ethics, Bias & Fairness
0945 - 1100	Understanding Bias in AI Models • Techniques for Reducing Bias in AI
0945 - 1100	Applications • AI Regulations & Compliance Frameworks • Case Studies on
	Ethical AI Failures
	Future of AI: Trends & Emerging Technologies
1100 – 1215	AI-Powered Automation & Robotics • Quantum Computing in AI • AI &
	Augmented Reality (AR) • Breakthroughs in Self-Learning AI Models
1215 – 1230	Break
1230 - 1345	Hands-On: End-To-End AI Project Development
	Selecting a Real-World AI Problem • Implementing Preprocessing, Feature
	Extraction & Model Training • Evaluating the AI Model for Production Use
	• Deploying the AI Solution
1345 - 1400	Course Conclusion
	Using this Course Overview, the Instructor(s) will Brief Participants about
	Topics that were Covered During the Course
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course













Practical Sessions

This hands-on, highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

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