

# Professional Development Training - Artificial Intelligence Application Form

Name in English			
Name in Chinese			
Mobile No.		Telephone No. (Home)	
Gender	Male <input type="checkbox"/> Female <input type="checkbox"/>	HKID No. (First 5 alphabet(s) and digits)	<u>XX(X)</u>
E-mail Address			
Correspondence address			
Working Experience		Position	
		Position	
Education			
Professional Qualifications			
Course	<input type="checkbox"/> Full Course (Module 1-6 with two modules from 7-9) HK\$27,200		
	<input type="checkbox"/> Module _____ Each module HK\$4,000		
	<input type="checkbox"/> Complimentary rate for teachers and Caritas members: Each module HK\$3,400		
	<input type="checkbox"/> Auditing: Each module HK\$2,800		
Payment Method	<input type="checkbox"/> Cheque : _____ <input type="checkbox"/> EPS : _____		

### Application Details

Completed application form, together with copies of academic / professional credentials and the first instalment of tuition fees, should be submitted

1. by post to Centre for Advanced and Professional Studies, Rm 202, 2 Chui Ling Lane, Tseung Kwan O, N.T. ; OR
2. in person to CAPS office.

Tuition fees can be paid by cheque or EPS. Payment by cheque must be made payable to "Caritas Institute of Higher Education" with the name and contact number of the applicant, and the programme title written at the back of the cheque.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Points to Note

1. Applicants must be Hong Kong residents. The HK identity document(s) should be presented during application. No age limit is set for each module except stated otherwise, but applicants should fulfill the academic or professional requirements.
2. Please return the completed application form, in person or by post, to the Centre for Advanced and Professional Studies (CAPS) together with photocopies of your identity card, academic credentials and information relevant to your application.
3. The application deadline usually 2 weeks before commencement of each module/ programme. Admission is on first-come-first-served basis.
4. The Institute reserves the right to decide whether an applicant is admitted or not, and holds the final decision to cancel a module/ programme in case of insufficient registration. If a module/ programme is cancelled by the Institute due to any reason, tuition fees paid will be refunded by crossed cheque.
5. Tuition fees paid will not be refunded in all cases unless the module/ programme is cancelled by the Institute. Upon registration, no change of class, transfer of fee or fees refund would be allowed.
6. Tuition fees can be paid by "EPS" or cheque. Please make the cheque payable to "Caritas Institute of Higher Education" and mark clear the applicant's name, course name and contact number at the back of the cheque. All receipts of tuition fee should be kept carefully. No replacement of receipt would be provided.
7. All classes take place as scheduled unless typhoon signal no.8 or Black Rainstorm Warning Signal is hoisted, or class cancellation is announced by the Education Bureau. Students have the responsibility to pay attention to announcements on the media during unstable weather.
8. The Institute will issue certificates of attendance or completion only to students who have attained 80% or above of the attendance.
9. The Institute reserves the right to alter class arrangements in case of special event or absence of tutors.
10. Unless with permission from the Institute, no recording activity is allowed in class. No sales or promotion activity is allowed unless authorised by "Caritas-Hong Kong".
11. Information supplied by applicants will be kept in strict confidence. Applicants may check or amend their personal information on the application form if necessary. In the event that applicants fail to provide adequate information, the Institute may not be able to process their applications or offer any service.
12. For any enquiry, please contact us by phone at 3653 6700.



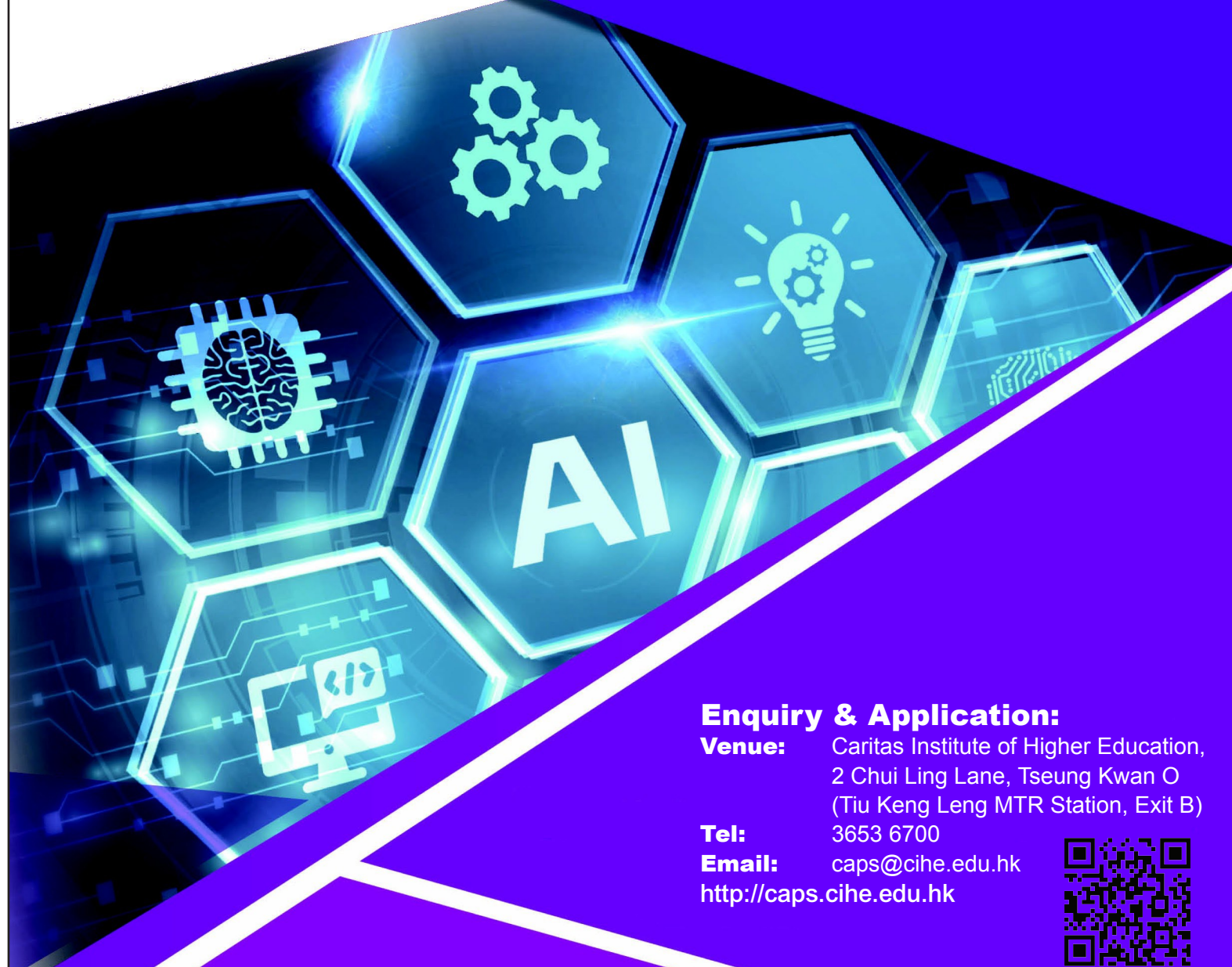
### Transportation:

- **Tiu Keng Ling MTR Station Exit B**
- **Bus Stop - 692P, 694, 792M, 796P, 796S, 796X, 798, E22A, N796**
- **Mini-bus Stop - 108A, 110**



**Caritas Institute of Higher Education**  
明愛專上學院

- Centre for Advanced & Professional Studies (CAPS)  
高等及專業教育中心
- School of Computing and Information Sciences  
電子計算及信息科學院



### Enquiry & Application:

**Venue:** Caritas Institute of Higher Education,  
2 Chui Ling Lane, Tseung Kwan O  
(Tiu Keng Leng MTR Station, Exit B)

**Tel:** 3653 6700

**Email:** caps@cihe.edu.hk  
<http://caps.cihe.edu.hk>



## Professional Development Training - Artificial Intelligence

專業發展培訓課程 -  
人工智能



CBCC & CIHE Centre for Advanced  
and Professional Studies - CAPS



## Objective:

Artificial Intelligence (AI) is indispensable in our daily life nowadays and has penetrated into many products and services. It is already creating hundreds of jobs in Hong Kong per month, and will be involved in the majority of jobs. AI job skills are in great demand globally. This Diploma is a set of comprehensive AI courses aiming to systematically introduce the basic knowledge about AI to students from various disciplines, and well equip them with the required knowledge for further study in the subject or for career advancement in the profession. Students will learn and grasp basic programming of PYTHON, machine learning and deep learning. Students will further learn how to use deep learning to solve problems in image processing and in natural language processing.

## Target participants:

- Professionals who are interested to perform job tasks using AI
- Job seekers who desires to find jobs in AI
- Managers/corporate owners who are interested to use AI to increase their product/service competence
- School teachers who are interested in AI

## Admission requirements:

- Foundation Certificate (Module 1 & 2): Completion of secondary education & interested in IT.
- Certificate or above level (Module 3 to 9): Adult learners with completion of post-secondary education in IT or related discipline.

## Award:

### Professional Development Training - Artificial Intelligence

- **Foundation Certificate** (Completed Module 1 & 2)
- **Certificate** (Completed Modules 1 to 4)
- **Advanced Certificate** (Completed Modules 1 to 6)
- **Diploma** (Completed Modules 1 to 6 and two modules from 7-9)

**Delivery mode:** Online and face-to-face learning activities will be used. Interactive lectures are conducted to equip students with the basic knowledge in AI. Content of the lecture is served as the basics for in-class discussions and practice. Hands-on experience in AI studies are introduced for sharing and reviewing real-life situations. Reading and assignments are required for learning review and reinforcement.

**Duration:** 45 hours for each module

**Medium of Instruction:** English supplemented by Cantonese

**Fees:** Full Course: HK\$27,200  
Each Module: HK\$4,000  
(Complimentary rate for teachers and Caritas members: HK\$3,400;  
Auditing: HK\$2,800)

## Teaching Team:

The programme is conducted by Professor H. Anthony CHAN and his teaching team.

### Professor H. Anthony CHAN, IEEE Fellow

Professor and Dean at CIHE, former 5G Wireless Standards and Research and AI research at Huawei Technologies American Wireless Lab, IETF Internet Standards, former ATT Lab delegate to 3GPP standards

### LI Chengze, PhD (HKU)

Assistant Professor at CIHE. Research areas: Computer Graphics, Computational Photography, Non-photoreliatic Rendering

### LIU XueTing Tina, PhD (CUHK)

Assistant Professor at CIHE. Research areas: Computer Graphics, Computer Vision, Machine Learning, Computational Manga and Anime

### ZHAO Ying Chao, PhD (Tsinghua)

Associate Professor and Programme leader of BSc(Hons.)AI degree programme at CIHE. Research areas: Algorithm design and Analysis, Computational Complexity, Operations Research, Algorithmic Game Theory

## Modules:

### 1. Introduction to Information Technology and Artificial Intelligence

This course introduces the concepts of current information technologies and emergent technologies as they are affecting so many aspects of human life. Their use, trends, and study in different fields and for different professions, not limited to digital entertainment and artificial intelligence, are discussed.

Date: 2022-23 First semester (Sep-Dec)\*

### 2. Python Programming

This course aims to introduce the students the basic programming concepts and techniques in developing programs for solving problems. The areas of study include language constructs, data types, control structures, functions, arrays, program documentation, coding, running, testing and debugging. Students will have hands-on workshops in writing programs in solving real life problems by using computer programming skills.

Date: 2022-23 First semester (Sep-Dec)\*

### 3. Artificial Intelligence

This course is suitable of both technical and non-technical students alike. It provides an overall view of what is AI, and introduces basic concepts and techniques of Artificial Intelligence, including knowledge representation, searching, planning, learning, and knowledge acquisition and expert systems. At the end of the course, students will gain a better insight on different AI technologies and how they can be used to address practical problems.

Date: 2022-23 Second semester (Jan-May)\*

### 4. Machine Learning

This course provides a broad introduction to machine learning. Machine learning algorithms allow computers to automatically learn to recognize complex patterns from empirical data, such as text and web documents, images, videos, sound, sensor-data, and databases. This course is intended to give an overview of machine learning from the practical standpoint, with a focus on applying machine learning algorithms to real-world problems. At the end of the course, students will have both working knowledge of and practical experience with machine learning algorithms.

Date: 2022-23 Second semester (Jan-May)\*

### 5. Deep Learning

In this course, we will learn about the basics of deep neural networks, and their applications to various AI tasks. With focus on both theory and practice, we cover models for various applications, how they are trained and tested, and how they can be deployed in real world applications. They will also be positioned to understand much of the current literature on the topic and extend their knowledge through further study.

Date: 2023-24 First semester (Sep-Dec)\*

### 6. Big Data and Business Intelligence

In this course, we will learn about the basics of deep neural networks, and their applications to various AI tasks. With focus on both theory and practice, we cover models for various applications, how they are trained and tested, and how they can be deployed in real world applications. They will also be positioned to understand much of the current literature on the topic and extend their knowledge through further study.

Date: 2023-24 First semester (Sep-Dec)\*

### 7. Natural Language Processing with Deep Learning

This course aims to introduce the students the basic concepts and techniques for natural language processing (NLP) applications and to teach the use of latest deep learning technologies for NLP. The traditional areas of study in NLP include regular expressions, text normalization, edit distance, N-gram language models, Bayes classification, vector semantics, neural language models, sequence processing, parsing, and information extraction. The new technologies include recursive neural network, word embedding, transformer and generative adversarial network. While being exposed to use tools for natural language resource annotation and text analysis, the students will be guided to use deep learning to solve NLP problems.

Date: 2023-24 Third semester (Jan-May)\*

### 8. Computer Vision and Image Processing with Deep Learning

This course aims to introduce students' concepts and techniques for computer vision and image processing. Techniques include both traditional image processing methods and up-to-date deep learning-based methods. Topics include image formation, image filtering, image features, image classification, image retrieval, object retrieval, object detection, edge detection, image super-resolution, image enhancement, image segmentation, image compression, motion tracking, 3D reconstruction, etc. Students are required to design and implement several of the algorithms covered in the course and complete a final project.

Date: 2023-24 Second semester (Jan-May)\*

### 9. Artificial Intelligence Project

The final diploma project is a substantial exercise that provides students with a framework to integrate the knowledge they have gained in preceding and concurrent AI courses. Students with work experience may explore a practical problem encountered in its own affiliation may be guided by staff to work out the solution using AI. The tasks include problem and value proposition, analysis, proposed solution, develop/build the solution, writing project report, presentation with demo. The project gives students an opportunity to extend their knowledge and experience to solve real problems, which may have value in real deployment in product or services.

Date: 2023-24 Every semester\*

\* Actual delivery date is subject to be confirmed.