



# Constructing a Neural Network in Machine Learning

(E1MLG004C)

<b>Introduction</b>	From fundamental mathematics to simple Blockly coding, we will learn the most important theories behind artificial intelligence and machine learning. We will use one of the most prominent form of machine learning today, Neural Network, to explore the world of Machine Learning. Students will learn the theory of neural network through simplified linear algebra and some math games, construct their own neural network with Blockly codes and train their own network through data they generate.
<b>Programme Type / Level</b>	Computer Programming Course (Level I) ( <a href="#">Token-required</a> )
<b>Instructor(s)</b>	To be confirmed
<b>Pre-requisite</b>	No special prerequisites are needed
<b>Target Participants</b>	<ul style="list-style-type: none"><li>➤ P4 to P6 HKAGE student members only in 2020/21 school year</li><li>➤ Class size: 30</li></ul>
<b>Medium of Instruction</b>	English with English handouts
<b>Certificate</b>	<b>E-Certificate</b> will be awarded to participants who have: <ul style="list-style-type: none"><li>❖ Attended <b>at least 3 sessions; AND</b></li><li>❖ Completed all the assignments with <b>satisfactory performance</b></li></ul>
<b>Intended Learning Outcomes</b>	Upon completion of the programme, participants should be able to: <ol style="list-style-type: none"><li>1. introduce artificial intelligence and machine learning;</li><li>2. investigate what neural networks and its applications and limitations;</li><li>3. equip students' with the computational thinking and ability to apply mathematical skills in solving real world problems.</li></ol>
<b>Application Procedure</b>	<b><u>This programme is Programmes with No Screening</u></b> There are no screening questions, written test or other screening methods for this type of programmes. <ul style="list-style-type: none"><li>● Student members can select up to 5 programmes from a list of selection. Applicants have to state the priority when submitting the application. (1<sup>st</sup> priority, 2<sup>nd</sup> priority, 3<sup>rd</sup> priority, etc). 1 token is required for each programme (For programme list, please refer to the issue 20 of Gifted Gateway (<a href="#">click here</a>));</li><li>● Application can only be submitted once. Once it is submitted, the priority and the programme selection cannot be changed;</li><li>● If a student member removes a programme from the application before the application deadline by withdrawal, the choice priority will remain unchanged. (For example: A student has selected three programmes and removed the programme with the 1<sup>st</sup> priority from the application. The choices of 2<sup>nd</sup> and 3<sup>rd</sup> priority will remain unchanged with no promotion in priority.);</li><li>● We will select the students based on the student's choice of priorities and a randomly generated selection by the computer system. If there is time clash between the applied programme and other programmes with offer, HKAGE will consider if the application will be accepted;</li><li>● Priority will be given to student members who have not completed the applied programmes;</li><li>● Student members should avoid applying programmes with time clash;</li><li>● The decision of HKAGE on the result of selection should be final.</li></ul>
<b>Application Deadline</b>	<b>22 Oct 2020 12:00 n.n</b> <b>Application Result Release Date</b> <b>30 Oct 2020</b>
If student members withdraw from the programme after the Application Deadline, the token will be deducted.	

## Schedule

Session	Date	Time	Venue (HKAGE)
1	28 Dec	9:30 a.m. – 12:30 p.m.	Room 105
2		2:00 p.m. – 5:00 p.m.	
3	29 Dec	9:30 a.m. – 12:30 p.m.	
4		2:00 p.m. – 5:00 p.m.	

## Enquiries

For enquiries, please contact Academic Programme Development Division on 3940 0101  
After language selection, press "1".



SCIENCES

科學