

111-2 Full Curriculum of Da-Yeh University

Information			
Title	AI Visual Art Project	Serial No./ID	2193 /CDC8913
Required/Credit	Optimal /1	Time/Place	(Wed)9 / 依公告
Language	Chinese	Grade Type	Text
Lecturer /Full- or Part-time	Cherng Jong Sheng /Full-time	Graduate Class	Non-graduating Class
School System /Dept /Class, Grade	Bachelor /Liberal Arts Center /Class 2, Grade 6		
Office Hour / Place	(Tue) 10:10~11:00, (Tue) 11:10~12:00, (Tue) 13:20~14:10, (Tue) 14:20~15:10, (Tue) 15:20~16:10, (Tue) 16:20~17:10 / H318		
Lecturer	n.a.		

Introduction

人工智慧（Artificial Intelligence, AI）是讓系統或電腦設備有模擬人類思考模式、邏輯與行為的能力，且能自行透過數據分析的過程，持續校正、進化。簡單來說，AI人工智慧就是讓電腦盡量像人類一樣思考、執行策略的科技。AI在智慧醫療、智慧城市、能源科技、企業經營行銷、教育、生活娛樂，乃至藝術設計領域都已有相當多的應用實例及發展潛力。

課程目標將探討AI繪圖、AI生成藝術與NFT (Non-fungible token，又稱為非同質化代幣)、AI續寫編劇小說、AI數據視覺藝術、遊戲引擎AI技術，並實際使用相關AI軟體/網站與Unity遊戲引擎進行藝術專題實作。

Outline

本課程研習除了說明AI人工智慧基本概念與在視覺藝術應用之外，重點在引導學生設計AI視覺藝術專題。

- 1.讓學生利用AI繪圖及生成藝術相關軟體，如:GAN (Generative Adversarial Network)，創作特色圖片。
- 2.讓學生利用AI編劇小說網站，如: NovelAI (novelai.net)，續寫小說及繪製二次元相應圖片，並嘗試將AI小說文字及圖片匯入遊戲引擎Unity，以製作輸出一個2D文字冒險遊戲APP。
- 3.讓學生輸入某類大量數據資料，如: 音樂音量或2D圖片像素，至遊戲引擎Unity，再利用Unity 3D粒子系統將其呈現出來，讓學生體驗如何將數據轉成視覺藝術，以模擬AI數據雕塑視覺藝術。

Prerequisite

無

The Relationship Between Courses and Departmental Core Competencies and Basic Skills

Fundamental Ability

Professional Ability

Practical Ability

Teamwork Spirit

 Active Learning

 Creativity and Innovation

Global Vision

Professional Ethics

Leadership and Management

Confidence and Perseverance



Humanistic Qualities

Teaching Plan						
Core Capability	Weight(%) 【A】	Ability index(Performance Indicators)	Teaching Methods	Assessment and Weight	Core Competency Learning Outcomes 【B】	Final Exam Grades 【C=B*A 】
Active Learning	40	Consists in helping students actively partake in a variety of learning processes with the aim to achieve self-promotion and self-realization.	Lecturing Group Discussion Practical Operation (Experiment, Machine Operation	Class Discussion: 20% Course Participation: 20% Product Manufacturing: 30% Experiment Operation: 30%	Total: 100	40
Creativity and Innovation	40	Consists in fostering students' creative and critical thinking skills together with their ability to identify and solve problems in an effective way.	Lecturing Group Discussion Practical Operation (Experiment, Machine Operation	Class Discussion: 20% Course Participation: 20% Experiment Operation: 30% Product Manufacturing: 30%	Total: 100	40
Humanistic Qualities	20	Consists in enriching students' cultural and social knowledge, helping them acquire the right values systems, and increasing their positive attitude towards society and others. It also involves the nurturing of other skills, especially in terms of i	Lecturing Group Discussion Practical Operation (Experiment, Machine Operation	Class Discussion: 20% Product Manufacturing: 30% Course Participation: 20% Experiment Operation: 30%	Total: 100	20

Grade Auditing

Experiment Operation: 30%

Product Manufacturing: 30%

Class Discussion: 20%

Course Participation: 20%

Book Type (Respect intellectual property rights. Please use official textbooks and do not illegally photocopy others' works.)

Book Type	Book name	Author
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Lesson Plan

Weeks	Content	Teaching Methods
1	Lesson Planning and Instructions & Intellectual Property Protection (use legitimate textbooks only) & Traffic safety Propaganda	Lecturing
2	Introduction to AI Visual Arts	Lecturing、 Group Discussion
3	AI-generated art pictures Visual art topic creation (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
4	AI-generated art pictures Visual art topic creation (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
5	AI-generated art pictures Visual art topic creation (3)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
6	Introduction to AI Continuation Graphic Novel	Lecturing、 Group Discussion
7	2D text adventure game app creation (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
8	2D text adventure game app creation (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
9	2D text adventure game app creation (3)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
10	2D text adventure game app creation (4)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
11	2D text adventure game app creation (5)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
12	Introduction to AI Data Visual Art	Lecturing、 Group Discussion
13	Special topic creation of AI data visual art effect (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
14	Special topic creation of AI data visual art effect (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
15	Special topic creation of AI data visual art effect (3)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation

16	Special topic creation of AI data visual art effect (4)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
17	Special topic creation of AI data visual art effect (5)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
18	Project Analysis and Discussion	Lecturing、 Group Discussion