

課程資訊 (Course Information)					
科號 Course Number	11010CS 591100	學分 Credit	2	人數限制 Class Size	80
中文名稱 Course Title	人工智慧書報討論				
英文名稱 Course English Title	AI seminars				
任課教師 Instructor	賴尚宏(LAI, SHANG-HONG) 郭昱廷(YU-TING KUO) more information				
上課時間 Time	F3F4	上課教室 Room	DELTA台達103		

提醒您：請遵守智慧財產權，勿使用非法影印教科書
Please respect the intellectual property rights, do not use illegal copies of textbooks.

此科目對應之系所課程規畫所欲培養之核心能力 Core capability to be cultivated by this course	<ul style="list-style-type: none"> ■ 具有活用資訊、數學及科學知識的能力。(10%) To have the ability to apply knowledge of computer science, mathematics, and science to daily life. (10%) ■ 具有創新及批判性思考，能發現、定義、及解決問題的能力。(15%) To be able to think creatively and critically as well as discover, define, and solve problems. (15%) ■ 具有分析、設計、開發、整合、測試、與評估資訊系統、元件、或演算法的能力。(10%) To be able to analyze, design, develop, integrate, test, and evaluate systems, components, and algorithms of computer science. (10%) ■ 具備良好的溝通技巧與跨領域團隊合作的能力。(10%) To have good communication skills and be able to cooperate with others in interdisciplinary teams. (10%) ■ 具備檢索文獻、閱讀論文、與撰寫論文的能力。(5%) To be able to search literatures, read and write academic papers. (5%) ■ 具有策劃及執行研究計畫、撰寫研究報告及簡報研究成果的能力。(10%) To be able to plan and execute research projects, write research reports, and present research results. (10%) ■ 能分析評估與資訊相關之產業脈動與最新的資訊科技進展。(15%) To be able to analyze and evaluate the most recent technological and industrial advancements regarding computer science. (15%) ■ 瞭解資訊科技對於全球性社會、經濟、文化等層面的影響與責任。(10%) To understand the social, economical, cultural effects of computer science and related technologies on the global level. (10%) ■ 瞭解國際視野及終身學習的重要性。(10%) To understand the importance of international view as well as lifelong education. (10%) ■ 尊重學術、工程倫理、及智慧財產權。(5%) To respect academics, engineering ethics, and intellectual property. (5%)
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課程簡述 (Brief course description)

This course aims to provide an overview of the latest advances in AI technology with a focus on practical applications in the industry. The AI technologies considered in this course includes machine learning/deep learning, computer vision, natural language processing, speech recognition, etc. In this course, we will invite renowned international and domestic subject matter expert guest speakers from the industry and academia to discuss the current trends of the AI research, opportunities, and challenges of AI deployment. This course features not only an overview of the latest advances in AI technology but also practical applications of AI technology in the industry. Upon completion of this course, the students shall have an overall understanding of the latest AI technology and its practical applications in the industry.

課程大綱 (Syllabus)

Course keywords:

Artificial Intelligence; Machine Learning; Deep Learning; Computer Vision; Natural Language Processing; Speech Recognition; AI Applications

一、課程說明(Course Description)

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二、指定用書(Text Books)

Assigned paper readings.

三、參考書籍(References)

Reference papers and books.

四、教學方式(Teaching Method)

Class and online lectures

Student presentations

五、教學進度(Syllabus)

1. Introduction to AI
2. Machine learning and AI I (supervised and unsupervised learning)
3. Machine learning and AI II (reinforcement learning and deep learning)
4. Advances in CV - Image understanding & object detection
5. Application of CV - Business Form processing
6. Application of CV - Bio-metric access control
7. Application of CV – Human Tracking
8. Advances in NLP - The Transformer
9. Application of NLP - Conversational AI/Assistant
10. Advances in speech recognition
11. Application of speech recognition
12. Application in retail
13. Application in healthcare
14. Project presentations

六、成績考核(Evaluation)

Class participation (30%), Reports (30%), Project presentation (40%)

