



# Cambridge English Teacher Online Training and EMI Teaching Experiences Sharing

2022/11/16 (Wednesday) 12:10 - 13:00 H418, NTPU Bilingual Education Office, NTPU



### Min-Yuh Day, Ph.D,

#### **Associate Professor**

**Institute of Information Management, National Taipei University** 

https://web.ntpu.edu.tw/~myday

2022-11-16









# Min-Yuh Day, Ph.D.



### **Associate Professor, Information Management, NTPU** Visiting Scholar, IIS, Academia Sinica Ph.D., Information Management, NTU Director, Intelligent Financial Innovation Technology, IFIT Lab, IM, NTPU

Artificial Intelligence, Financial Technology, Big Data Analytics, **Data Mining and Text Mining, Electronic Commerce** 















- Learning Experiences from Cambridge English Teacher Online Training Course
- EMI Teaching Experiences Sharing

# EMI Teacher Community AACSB, NTPU

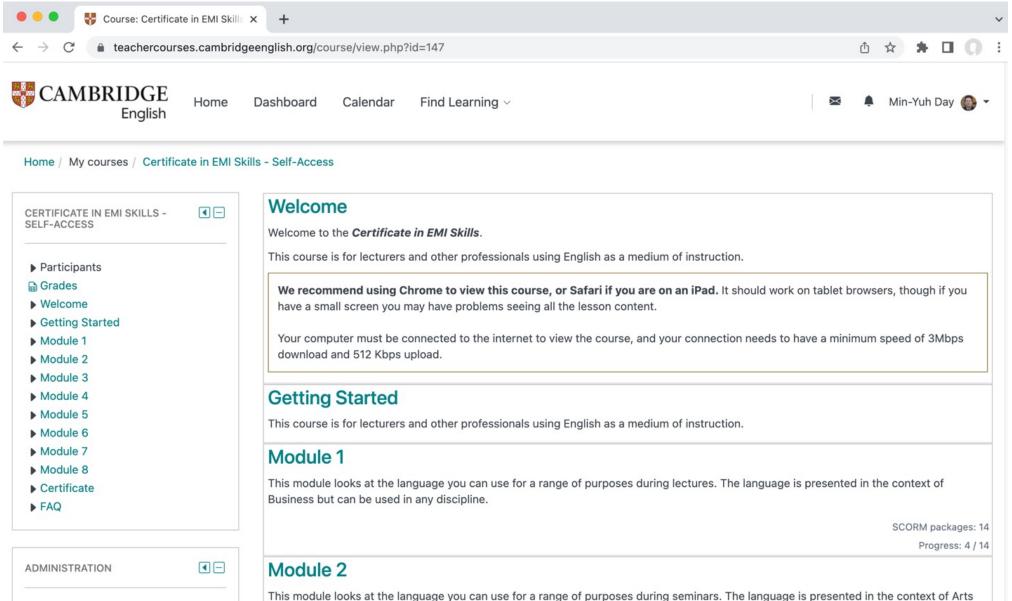
# **EMI Teacher Community Activities**



- 1. 2022/05/05 (Thursday) 12:00 pm-13:00 pm, B302
  - Teaching Experiences Sharing of EMI Courses in AI for Business Applications
  - Min-Yuh Day, National Taipei University,
  - <u>https://meet.google.com/zuc-yyaw-mnt</u>
- 2. 2022/05/11 (Wednesday) 9:10 am 12:00 pm, B313
  - Agile Principles Patterns and Practices in FinTech and Digital Transformation
  - Shihyu (Alex) Chu, Senior Industry Analyst/Program Manager, Market Intelligence & Consulting Institute (MIC)
  - <u>https://docs.google.com/forms/d/e/1FAIpQLScI7zvABRvtffqeZgT-\_OWNbOsyIXBOn6Lt\_tJ4-SuhZENyRQ/viewform</u>
- 3. 2022/05/11 (Wednesday) 12:10 pm 13:00 pm, B313
  - Professional Business Presentations in English
  - Shihyu (Alex) Chu, Senior Industry Analyst/Program Manager, Market Intelligence & Consulting Institute (MIC)
  - https://docs.google.com/forms/d/e/1FAIpQLScA0Qq52qjQ5MDAyEDxHyui7VrVdkIpsOSDzWXAwWi-kKLVAw/viewform
- 4. 2022/05/18 (Wednesday) 12:10 pm 13:00 pm, B313
  - Web 3: From DeFi to WoFi
  - Prof. Shih-wei Liao, National Taiwan University
  - <u>https://docs.google.com/forms/d/e/1FAIpQLSdkE-x4CW2w2LAjPEJcHCx25GAx4KYS1cHxUv9iiroda1cXYQ/viewform</u>

# Learning Experiences from **Cambridge English Teacher Online Training** Course

- Your EMI online course (Cambridge English-Certificate in EMI Skills) account is ready to log in.
- Please follow the steps below for your access:
  - 1. System link: https://teachercourses.cambridgeenglish.org/login/index.php
  - 2. Log in to the account (your e-mail address): email@gm.ntpu.edu.tw
  - 3. Initial password (please copy and paste): \*\*\*\*\*\*\*
  - 4. Please change your password right after first logging in.
  - 5. Please complete all the eight modules in the course before 2023/6/30.



https://teachercourses.cambridgeenglish.org/login/index.php

#### 8 Module 112 Sections

- Each module consists of an introduction followed by 4 content sections and an 'over to you' section for you to review and apply your learning.
  - Module 1 Language for lectures
  - Module 2 Language for seminars
  - Module 3 Language for small groups and practical sessions
  - Module 4 Language for tutorials and supervision
  - Module 5 Language for online communication
  - Module 6 Language for evaluation and feedback
  - Module 7 Language for developing and extending professional roles
  - Module 8 Language for fulfilling professional responsibilities

#### Module 1

•

- <u>SCORM packageM1 S1 L1 Introduction</u>
- SCORM packageM1 S2 L1 Enhancing lecture content
- SCORM packageM1 S2 L2 Engaging students
- SCORM packageM1 S2 L3 Develop your lecture style
- SCORM packageM1 S3 L1 Phrases for introducing lectures
- SCORM packageM1 S3 L2 Vocabulary for introductions
- SCORM packageM1 S3 L3 Develop your lecture introductions
- SCORM packageM1 S4 L1 Language for signposting
- SCORM packageM1 S4 L2 Cohesion in lectures
- SCORM packageM1 S4 L3 Develop your lecture language
- SCORM packageM1 S5 L1 Language for conclusions
- SCORM packageM1 S5 L2 Giving instructions
- SCORM packageM1 S5 L3 Develop your lecture conclusions
- SCORM packageM1 S6 L1 Over to you ...

#### 3.1 Lecture introductions

What does the lecturer include in their lecture introduction? There is more than one correct answer.





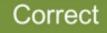


explains what the lecture will help students understand.

presents the students with a problem to discuss.



shows how the lecture relates to the previous lecture.





#### 3.1 Phrases for introducing lectures

Listen to the lecturer. Match each phrase to its function.

Recording 1	shows how the lecture is connected to other lectures
Recording 2	explains what the lecture is about
Recording 3	explains what the lecture will help students to understand
Recording 4	presents a list of the lecture content
Recording 5	asks questions or present problems for students

# EMI Teaching Experiences Sharing





# **EMI Courses in AI for Business Applications**

- Artificial Intelligence
  - Fall 2022
- Artificial Intelligence in Finance and Quantitative
  - Fall 2022
- Artificial Intelligence for Text Analytics
  - Spring 2022
- Software Engineering
  - Spring 2022







- Artificial Intelligence for Text Analytics
  - Spring 2022
- Software Engineering
  - Fall 2020, Fall, 2021, Spring 2022, Spring 2023
- Artificial Intelligence in Finance and Quantitative
  - Fall 2021, Fall 2022
- Artificial Intelligence
  - Spring 2021, Fall 2022
- Data Mining
  - Spring 2021
- Big Data Analytics
  - Fall 2020, Spring 2023
- Foundation of Business Cloud Computing
  - Spring 2021, Spring 2022







#### • Al in Finance Big Data Analytics (Fall 2019)

• MBA, DBETKU (3 Credits, Elective) [Full English Course] [Distance Learning]

### • Big Data Mining (Fall 2018)

- MBA, DBETKU (3 Credits, Required) [Full English Course]
- Social Media Apps Programming (Fall 2013 Fall 2018)
  - MBA, IMTKU (2 Credits, Elective) [Full English Course]
  - Fall 2018, Fall 2017 , Fall 2016 , Fall 2015 , Fall 2014 , Fall 2013



**Artificial Intelligence** 

# Introduction to Artificial Intelligence

1111AI01 MBA, IM, NTPU (M6132) (Fall 2022) Wed 2, 3, 4 (9:10-12:00) (B8F40)



Min-Yuh Day, Ph.D,

#### **Associate Professor**

Institute of Information Management, National Taipei University

https://web.ntpu.edu.tw/~myday

2022-09-14







## Course Syllabus National Taipei University Academic Year 111, 1<sup>st</sup> Semester (Fall 2022)

- Course Title: Artificial Intelligence
- Instructor: Min-Yuh Day
- Course Class: MBA, IM, NTPU (3 Credits, Elective)
- Details
  - In-Class and Distance Learning EMI Course (3 Credits, Elective, One Semester) (M6132)
- Time & Place: Wed, 2, 3, 4, (9:10-12:00) (B8F40)
- Google Meet: <u>https://meet.google.com/miy-fbif-max</u>





# **Course Objectives**



- 1. Understand the fundamental concepts and research issues of <u>Artificial Intelligence</u>.
- 2. Equip with Hands-on practices of <u>Artificial Intelligence</u>.
- 3. Conduct information systems research in the context of <u>Artificial Intelligence</u>.

# **Course Outline**



- This course introduces the fundamental concepts, research issues, and hands-on practices of Artificial Intelligence.
- Topics include:
  - **1.** Introduction to Artificial Intelligence
  - 2. Artificial Intelligence and Intelligent Agents
  - 3. Problem Solving
  - 4. Knowledge, Reasoning and Knowledge Representation, Uncertain Knowledge and Reasoning
  - 5. Machine Learning: Supervised and Unsupervised Learning
  - 6. The Theory of Learning and Ensemble Learning
  - 7. Deep Learning, Reinforcement Learning
  - 8. Deep Learning for Natural Language Processing
  - 9. Computer Vision and Robotics
  - **10.** Philosophy and Ethics of AI and the Future of AI
  - 11. Case Study on Al

## **Core Competence**



• Exploring new knowledge in information technology, system development and application 80 %

Internet marketing planning ability 10 %

Thesis writing and independent research skills 10 %



# **Four Fundamental Qualities**

- Professionalism
  - Creative thinking and Problem-solving 40 %
  - Comprehensive Integration 30 %
- Interpersonal Relationship
  - Communication and Coordination 5 %
  - Teamwork 5 %
- Ethics
  - Honesty and Integrity 5 %
  - Self-Esteem and Self-reflection 5 %
- International Vision
  - Caring for Diversity 5 %
  - Interdisciplinary Vision 5 %



# **College Learning Goals**

- Ethics/Corporate Social Responsibility
- •Global Knowledge/Awareness
- Communication
- Analytical and Critical Thinking



# **Department Learning Goals**

- Information Technologies and
   System Development Capabilities
- Internet Marketing Management Capabilities
- Research capabilities





- Week Date Subject/Topics
- **1 2022/09/14 Introduction to Artificial Intelligence**
- 2 2022/09/21 Artificial Intelligence and Intelligent Agents
- 3 2022/09/28 Problem Solving
- 4 2022/10/05 Knowledge, Reasoning and Knowledge Representation; Uncertain Knowledge and Reasoning
- 5 2022/10/12 Case Study on Artificial Intelligence I
- 6 2022/10/19 Machine Learning: Supervised and Unsupervised Learning





- 7 2022/10/26 The Theory of Learning and Ensemble Learning
- 8 2022/11/02 Midterm Project Report
- 9 2022/11/09 Deep Learning and Reinforcement Learning
- 10 2022/11/16 Deep Learning for Natural Language Processing
- 11 2022/11/23 Invited Talk: AI for Information Retrieval
- 12 2022/11/30 Case Study on Artificial Intelligence II





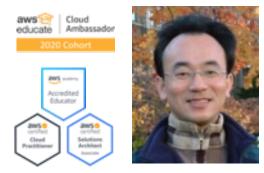
- Week Date Subject/Topics
- 13 2022/12/07 Computer Vision and Robotics
- 14 2022/12/14 Philosophy and Ethics of AI and the Future of AI
- 15 2022/12/21 Final Project Report I
- 16 2022/12/28 Final Project Report II
- 17 2023/01/04 Self-learning
- 18 2023/01/11 Self-learning

**Artificial Intelligence in Finance and Quantitative Analysis** 



# Introduction to Artificial Intelligence in Finance and Quantitative Analysis

1111AIFQA01 MBA, IM, NTPU (M6132) (Fall 2022) Tue 2, 3, 4 (9:10-12:00) (B8F40)



### Min-Yuh Day, Ph.D,

### **Associate Professor**

Institute of Information Management, National Taipei University

https://web.ntpu.edu.tw/~myday

2022-09-13



https://meet.google.com/ paj-zhhj-mya







- 1 2022/09/13 Introduction to Artificial Intelligence in Finance and Quantitative Analysis
- 2 2022/09/20 AI in FinTech: Metaverse, Web3, DeFi, NFT, Financial Services Innovation and Applications
- 3 2022/09/27 Investing Psychology and Behavioral Finance
- 4 2022/10/04 Event Studies in Finance
- 5 2022/10/11 Case Study on AI in Finance and Quantitative Analysis I
- 6 2022/10/18 Finance Theory





- 7 2022/10/25 Data-Driven Finance
- 8 2022/11/01 Midterm Project Report
- 9 2022/11/08 Financial Econometrics and Machine Learning
- 10 2022/11/15 AI-First Finance
- 11 2022/11/22 Industry Practices of AI in Finance and Quantitative Analysis
- 12 2022/11/29 Case Study on AI in Finance and Quantitative Analysis II





- Week Date Subject/Topics
- 13 2022/12/06 Deep Learning in Finance; Reinforcement Learning in Finance
- 14 2022/12/13 Algorithmic Trading; Risk Management; Trading Bot and Event-Based Backtesting
- 15 2022/12/20 Final Project Report I
- 16 2022/12/27 Final Project Report II
- 17 2023/01/03 Self-learning
- 18 2023/01/10 Self-learning

### **Artificial Intelligence for Text Analytics**



# Introduction to Artificial Intelligence for Text Analytics

1102AITA01 MBA, IM, NTPU (M5026) (Spring 2022) Tue 2, 3, 4 (9:10-12:00) (B8F40)



### Min-Yuh Day, Ph.D,

#### **Associate Professor**

**Institute of Information Management, National Taipei University** 

https://web.ntpu.edu.tw/~myday

2022-02-22



https://meet.google.com/ paj-zhhj-mya







- **1 2022/02/22 Introduction to Artificial Intelligence for Text Analytics**
- 2 2022/03/01 Foundations of Text Analytics: Natural Language Processing (NLP)
- 3 2022/03/08 Python for Natural Language Processing
- 4 2022/03/15 Natural Language Processing with Transformers
- 5 2022/03/22 Case Study on Artificial Intelligence for Text Analytics I
- 6 2022/03/29 Text Classification and Sentiment Analysis





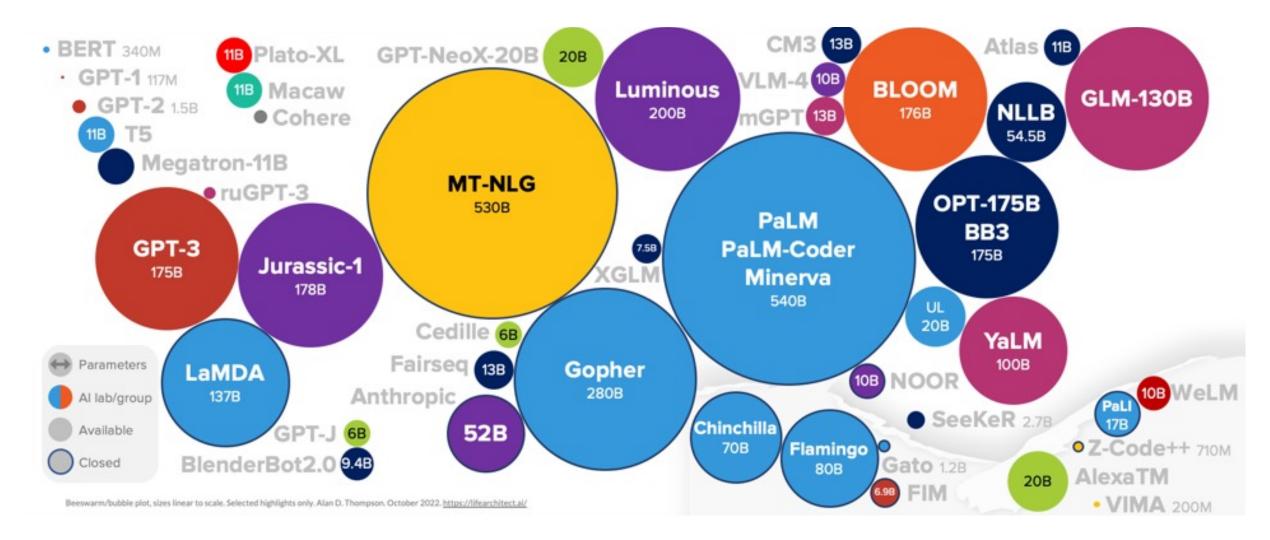
- 7 2022/04/05 Tomb-Sweeping Day (Holiday, No Classes)
- 8 2022/04/12 Midterm Project Report
- 9 2022/04/19 Multilingual Named Entity Recognition (NER), Text Similarity and Clustering
- 10 2022/04/26 Text Summarization and Topic Models
- 11 2022/05/03 Text Generation
- **12 2022/05/10 Case Study on Artificial Intelligence for Text Analytics II**





- 13 2022/05/17 Question Answering and Dialogue Systems
- 14 2022/05/24 Deep Learning, Transfer Learning, Zero-Shot, and Few-Shot Learning for Text Analytics
- 15 2022/05/31 Final Project Report I
- 16 2022/06/07 Final Project Report II
- 17 2022/06/14 Self-learning
- 18 2022/06/21 Self-learning

### Language Models Sizes (GPT-3, PaLM, BLOOM)



### BLOOM

#### **BigScience Large Open-science Open-access Multilingual Language Model**



BigScience Large Open-science Open-access Multilingual Language Model

Version 1.3 / 6 July 2022

Current Checkpoint: Training Iteration 95000

Total seen tokens: 366B

Downloads last m 12,875	nonth	$\sim$	_~~	
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Source: <a href="https://huggingface.co/bigscience/bloom">https://huggingface.co/bigscience/bloom</a>

## Microsoft Azure Text to Speech (TTS)

#### Text SSML

You can replace this text with any text you wish. You can either write in this text box or paste your own text here.

Try different languages and voices. Change the speed and the pitch of the voice. You can even tweak the SSML (Speech Synthesis Markup Language) to control how the different sections of the text sound. Click on SSML above to give it a try!

Enjoy using Text to Speech!

#### Language

English (United States)

#### Voice

Jenny (Neural)

Speaking style

General

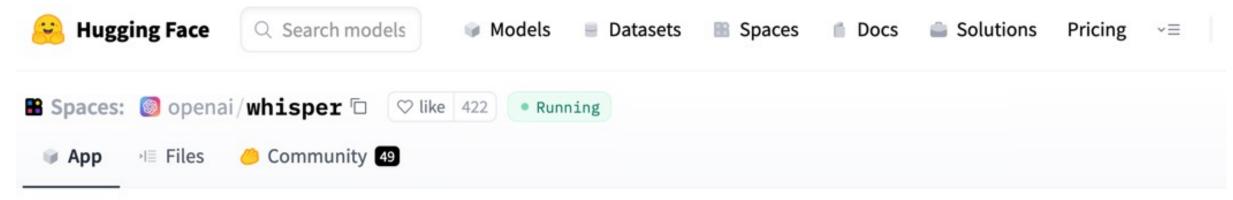
Speaking speed: 1.00

Pitch: 0.00

Play

Source: <u>https://azure.microsoft.com/en-gb/products/cognitive-services/text-to-speech/</u>

# **OpenAl Whisper**

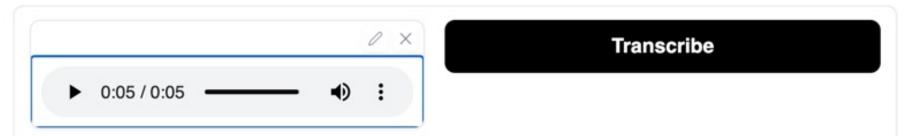


#### " Whisper

Whisper is a general-purpose speech recognition model. It is trained on a large dataset of diverse audio and is also a multi-task model that can perform multilingual speech recognition as well as speech translation and language identification. This demo cuts audio after around 30 secs.

You can skip the queue by using google colab for the space:





#### Source: <a href="https://huggingface.co/spaces/openai/whisper">https://huggingface.co/spaces/openai/whisper</a>

# **Synthesia AI Video Generation**

Create videos from plain text in minutes

Features V

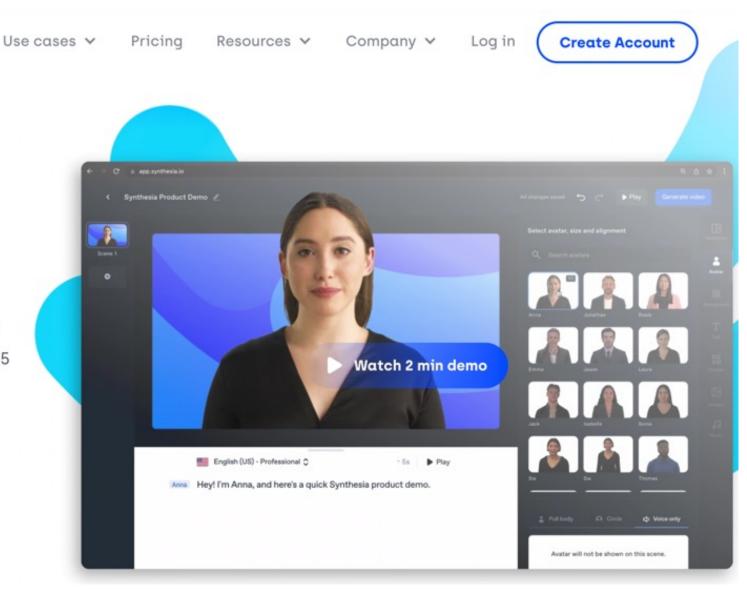
Synthesia is the #1 rated AI video creation platform.

Thousands of companies use it to create videos in 65 languages, saving up to 80% of their time and budget.

Create a free AI video

🗔 No credit card required

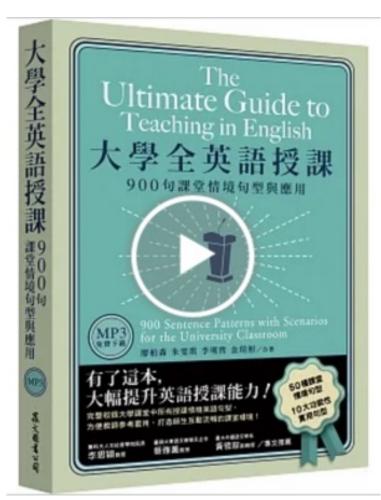
🔿 synthesia



#### Source: <a href="https://www.synthesia.io/">https://www.synthesia.io/</a>

### 大學全英語授課:900句課堂情境句型與應用 (美式發音MP3免費下載)

作者: 廖柏森,朱雯琪,李明哲,金瑄桓 出版社:眾文 出版日期: 2021/01/20



Source: https://www.books.com.tw/products/0010881647







- Learning Experiences from Cambridge English Teacher Online Training Course
- EMI Teaching Experiences Sharing



### EMI Workshop, NTPU Bilingual Education Office

**Q & A** 



# Cambridge English Teacher Online Training and EMI Teaching Experiences Sharing

2022/11/16 (Wednesday) 12:10 - 13:00 H418, NTPU Bilingual Education Office, NTPU



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