# 강 의 계 획 서(Syllabus)

## [1] 기본 정보(Basic Information)

### ■ 강의 정보(Course Information)

| 교과목명<br>(Course Title) | AI를 위한 딥러닝 | 강의유형<br>(Course Type) | *이론* |
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## [2] 학습 목표/성과(Learning Objectives/Outcomes)

### ■ 과목 설명(Course Description)

This course provides students practical knowledge they need for data scientist in the real-world business.
In this course, we will learn deep learning with python, especially, tensorflow and keras.
We will cover basics of deep learning, convolutional neural networks and recurrent neural networks.

### ■ 학습 목표(Learning Objectives)

This course will
1. improve students' computational skills.
2. provide a chance to face with data challenges.
3. learn deep learning

### ■ 학습 성과(Learning Outcomes)

By the end of this class, students will be able to
1. have applied experiences with machine learning on large datasets.
2. articulate real world business questions and using statistical techniques to arrive at an answer using available data.
3. efficiently co-work with their team members with different backgrounds.

## [3] 강의 진행 정보(Course Methods)

### ■ 강의 진행 방식(Teaching and Learning Methods)

| 강의 진행 방식 | 추가 설명 |
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| *Online lecture* | |
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### ■ 수업 자료(Textbooks, Reading, and other Materials)

| 수업 자료 | 제목 | 저자 | 출판일/게재일 | 출판사/학회지 |
|---|---|---|---|---|
| 주교재 | Deep learning with python 2nd eddition | François Chollet | 2021. 12. 21 | Manning |

| 차시 | 강사명 | 수업주제 및 내용 | 제출 과제 | 추가 설명 |
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| \multicolumn | | [4] 수업 일정(Course Schedule) | | |
| 1 | 곽일엽 | -Course Introduction<br>-About DataScientist | | |
| 2 | 곽일엽 | -Chapter 1 What is deep learning?<br>-Introduction to colab, github and markdown | | |
| 3 | 곽일엽 | - Chapter 2 Mathematical Building Blocks of Deep-learning<br> - First look on neural nets, gear of neural nets | | |
| 4 | 곽일엽 | - Chapter 2 Mathematical Building Blocks of Deep-learning<br> - Gradient-based optimization<br>- Chapter 3 Introduction to Keras and Tensorflow | | |
| 5 | 곽일엽 | - Chapter 4 Getting Started with Neural Networks | | |
| 6 | 곽일엽 | - Chapter 5 Fundamentalsof Machine Learning<br>- Chapter 6 The universal workflow of machine learning | | |
| 7 | 곽일엽 | - Chapter 7 Working with Keras | | |
| 8 | 곽일엽 | - Chapter 8 Introduction to deep learning for computer vision | | |
| 9 | 곽일엽 | - Chapter 9 Advanced deep learning for computer vision | | |
| 10 | 곽일엽 | - Chapter 10 Deep learning for timeseries | | |
| 11 | 곽일엽 | - Chapter 11 Deep learning for text (1) | | |
| 12 | 곽일엽 | - Chapter 11 Deep learning for text (2) | | |
| 13 | 곽일엽 | - Chapter 12 Generative deep learning (1) | | |
| 14 | 곽일엽 | - Chapter 12 Generative deep learning (2) | | |

| [5] 수강생 학습 안내 사항 |
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