

(SYLLABUS)

1.

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|----------------------|---|--------------|-------------|----------------------------|-----------------|
| (Course Title) | | (Instructor) | | | |
| (Year) | 2025 | (Semester) | 1 | (Course No.) | 2150097701 |
| (Class) | 01 | (Open to) | 4 IT , | (Course Classification) | -IT / - |
| / | 3.0 / 03 / 3 | | 100 | 가 | 가 |
| | | | | | |
| (Office) | | (Telephone) | 02-820-0710 | (e-mail) | chlee@ssu.ac.kr |
| | (FL), (PBL) | | + | | 2023 |
| | (*) (ABEEK Classification) | | | (*) (ABEEK Requirement) | |
| | | | | | |
| | () Python programming, , () , , (), | | | | |
| (Course Description) | | | | | |

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| | |
| MLP, CNN, RNN | |
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| 가 | (100) | (100%) |
| | 50 | 50 |
| | 15 | 15 |
| | 25 | 25 |
| | 10 | 10 |

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|------------------|--|---|
| (Required Texts) | | * /Hands-on Machine learning with Scikit-Learn, Keras &Tensorflow/A. Geron/O'Reiley/2022/3rd/ |
| | () | * //2023 |
| | : Python programming, Python . | |
| | Engaged learning + () 가 . 가 , : 50%, 15%, 40%, 10% | |

2.

| (Week) | (Keyword) | (Description) | | (Texts) |
|--------|--------------|--|-------------|-------------------------------|
| 01 | Introduction | , , | | 10 |
| 02 | ANN | Keras MLP (1): Keras API | , , | 10 |
| 03 | ANN | Keras MLP (2): 가 Keras MLP (3): | , , , , , , | 10 |
| 04 | ANN | Callback and tensorboard Fine Tuning | , , | 10 |
| 05 | DNN | Gradient | , , | 11 |
| 06 | DNN | optimizer Regularization overfitting | , , | 11 |
| 07 | CNN | CNN | , , | 14 |
| 08 | CNN | CNN , Keras CNN | , , | 14 |
| 09 | CNN | Localization | | 14 |
| 10 | RNN | Recurrent Neural network , | , , | 15 |
| 11 | Transformer | Char RNN Sentiment analysis | , , | 16 |
| 12 | Autoencoders | Attention and transformer Transformer architecture | , , , , , , | 16 |
| 13 | | Autoencoder , , Autoencoder CNN/RNN | , , | 5/31() 4:00-6:30 +@ 17 |

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| | | | | |
|----|---------|--------------------------------|---|----|
| 14 | GAN | Generative Adversarial Network | , | 17 |
| 15 | Deep RL | | , | 18 |

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3. ()

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| | Open-ended problem | | |
| | Teamwork | | |
| | Communication skills | | |