Smart Mobile Platform

Syllabus

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Introduction

- Objectives: **A.I. Techniques for Mobile Platforms**
- Hours/Location: 9am-12pm @ Engineering Building 366
- Instructor: **Joongheon Kim**
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- Contents
  - Deep Neural Network
  - Deep Reinforcement Learning
  - Inverse Reinforcement Learning and Imitation Learning
  - Federated Learning
  - Lyapunov Optimization

Class Schedule

Week	In-Classroom	Paper ID	ETC
01	Syllabus and Introduction		
02	Deep Neural Network (Basics – Regression/Classification)		
03	Deep Neural Network (Basics – Softmax/Neural Network Intro)		
04	Deep Neural Network (Basics – Neural Network Implementation)		
05	Deep Neural Network (Basics – Keras, CNN Intro)		
06	No-Class		DNN paper list will be posted.
07	Deep Neural Network (Basics – CNN Implementation, GAN)		
08	No-Class [MIDTERM EXAM]		
09	Lyapunov Optimization		
10	Deep Neural Network (Paper Reading)		
11	Deep Reinforcement Learning (Basics)		DRL/IRL/IL paper list will be posted.
12	Inverse Reinforcement Learning and Imitation Learning (Basics)		
13	Deep Reinforcement Learning (Paper Reading)		
14	Federated Learning		
15	Final Project Presentations		
16	No-Class [FINAL EXAM]		

- Grading Criteria
  - Paper Summary Note Submission → 40%
    - Paper presentation volunteers will get additional credits.
  - Take-Home Exam (midterm) → 20%
  - Take-Home Exam (final) → 30%
  - Final Project → 10%
    - Final project slide submission is mandatory.
    - Final project slide presentation opportunities will be given to selected students.