



# Smart Mobile Platform Syllabus

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- 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	Decision Theory		
11	SVM, Clustering		DRL/IRL/IL paper list will be posted.
12	Deep Reinforcement Learning (Basics Theory)		
13	Deep Reinforcement Learning (Basics Implementation)		
14	Inverse Reinforcement Learning and Imitation Learning (Basics)		
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.