# Natural Language Processing

(Course Orientation & NLP introduction)

소프트웨어융합학과 **노기섭 교수** 

(kafa46@hongik.ac.kr)

### **Professor**

### Prof. Giseop Noh

- Air Force Academy: Bachelor in Industrial Engineering
- University of Colorado: Master of Computer Science
- Seoul National University: PhD in Computer Engineering
- **■** Office Location: Bldg. D402

#### Contact

- Phone (wired): 044-860-2596
- Email: kafa46@hongik.ac.kr

### Personal pages

- Personal homepage: <a href="https://prof.acin.kr">https://prof.acin.kr</a>
- Lab: https://deepshark.org/
- YouTube channel: <a href="https://www.youtube.com/channel/UCkaKxO4KznPltTllGhjG59g">https://www.youtube.com/channel/UCkaKxO4KznPltTllGhjG59g</a>



### **Course Materials**

### Textbook

- Not required

### Supplementary

- Not required
- Will be provided by professor if required
  - You can use Googling
    - Papers
    - Technical Reports
    - Blog posts in Deeplearning or NLP

### **Course objectives**

### Understanding

- Natural language
- Data pre-processing
- Word embedding
- Architectures
  - Transformer, BERT, GPT, etc.
  - Transfer Learning

### Term Project

- Individual project only
- Topic: NLP related research & implementation
- Project plan, result should be presented individually (mid-term & final exam periods)

## Syllabus

1	Course orientation, Introduction to NLP		
2	NLP and frameworks, Theroy - Probability		
3	Theory - Linear Algebra		
4	Ambiguity in natural language		
5	Subword Segmentation & Word embedding		
6	Project plan presentation	08 주	Temporal data and recurrent neural network
7	Mid-term exam	09 주	Overview in NLP architectures
		10 주	Transformer
		11 주	BERT and GPT technologies
		12 주	Student seminar
		13 주	Student seminar
		14 주	Student seminar
		15 주	Final exam

### **Course Credits**

#### Course Structure

- Theory 40%
- Student Seminar (Project Related) 40%
- Implementation 20%

#### Evaluation

- Mid-term 30%
- Final exam 30%
- Student seminar 20%
- Attendance 20%



수고하셨습니다 ..^^..