Ubiquitous Computing
Spring 2017
Project

- **Introduction**

  The purpose of the project is to provide the student with an opportunity for investigating an important technology imperative in the application of ubiquitous computing paradigm introduced in the course. Each student studies a selected topic in-depth, and presents it in the class. The most important requirement is to grasp the principal operational mechanism and underlying theory. For this, recently published technical papers, articles, reports, etc are surveyed. Through the project, the student can enhance the skill for reading technical materials, and also oral presentation in English.

- **Recommended topics**
  - 3D printing, Google glass, ebook, OLED, trilateration, machine learning, etc. (next page).

- **Schedule & grading**
  - Presentation May 15 – June 12, six presentations per day

- **Report format**
  - Presentation
    - About 20 PPT slides
    - The slide should include diagrams, tables, and brief explanations (no small fonts) for clear understanding and presentation
    - Include a case study if the project topic is related to some theory

- **Remarks**
  - Each person spends 25 minutes for the presentation, including discussions.
  - Grading of the project is based on the level of the understanding, contents of the presentation file, and clarity of the presentation.
  - One problem related to each project topic will appear in the final exam.
  - Send the presentation file to the TA by 6 pm of the previous day of the presentation. Also submit the hard copy of the presentation file during the class.

No	Date	Topic	Presenter	Remark
1	May 15	Feature engineering	Daechun	
2		Bayesian inference	Sejune	
3		Bagging	Heejin	
4		Logistic regression	Youngkyung	
5		Linear regression	Anna	
6		Perceptron	Fery	
7	May 22	Decision tree learning	Hoque	
8		*k*-NN	Sunjoong	
9		Bayesian network	Sungho	
10		Support vector machine	Hyunwoong	
11		Neural network	Taegyu	
12		Nonlinear regression	Manhong	
13	May 29	*k*-means clustering	Soonil	
14		Anomaly detection	Binh	
15		Principal component analysis	Peiheng	
16		Singular value decomposition	Kwanghyun	
17		Hidden Markov Model	Gan	
18		Deep learning	Andre	
19	June 5	Q learning	Joonbum	
20		Temporal Difference	Beomsoo	
21		Convolutional neural network	Imran	
22		Self-organizing map	Mindy	
23		Least squares	Seunghyun	
24		Linear discriminant analysis	Thorina	
25	June 12	Conditional random fields	Jeong	
26		Markov decision process	Chao	
27		Canonical-correlation analysis		
28		Kolmogorov–Smirnov test		
29		Anderson–Darling test		
30		Relevance vector machine		
32		Hierarchical cluster analysis		