

Project #1. Idea Proposal & Requirements Engineering

Open: 2018-09-05 (SEP. 05th, 2018)

Due: 2018-09-17 (SEP. 17th, 2018)

Your first team project is (i) to propose a software system and (ii) to elicit and analyze requirements of your system (informally). For the rest of this semester, your team will analyze, design, and implement the system proposed. Thus, your team may have to discuss your possible topics carefully and determine the direction of your project.

The software system to be developed can be an application or service (it could be a mobile/web/desktop application) that uses public data. Nowadays, the ability to analyze or utilize data is essential, and many kinds of data are available online. For this project, there is no limit to the method and purpose of using the data, and you can use the available datasets or APIs to access the data. In other words, your application should be able to provide a service to your customer in some way with analyzing or utilizing the public data.

Here are examples of sources of public data. TAs have browsed public data repositories and recommend the listed sources, but you don't need to select one from these sources. Additional sources are in this article (<https://www.forbes.com/sites/bernardmarr/2016/02/12/big-data-35-brilliant-and-free-data-sources-for-2016/#212d5235b54d>).

#	Link	Summary
1	https://www.data.gov/	All government data managed by US Government
2	https://www.opendatane트워크.com/	Public data with various categories and region
3	http://data.europa.eu/euodp/en/data/	Public data managed by EU institutions
4	https://registry.opendata.aws/	The huge data set provided by AWS
5	https://www.gapminder.org/data/	WHO data, etc.
6	https://trends.google.com/trends/explore	Google trend data
7	https://www.ncdc.noaa.gov/data-access/quick-links#loc-clim	Climate data
8	http://developer.nytimes.com/	New York Times data
9	https://aws.amazon.com/ko/datasets/million-song-dataset/	Song data by Amazon
10	http://archive.ics.uci.edu/ml/index.php	Pre-processed data for machine learning
11	https://www.data.go.kr/	Korean public data portal (Korean)
12	http://tportal.daejeon.go.kr	Daejeon transportation data (Korean)

Here are examples of motivating topics to guide your idea proposal. You can refer to the examples below, but you don't need to select one of these topics. You can suggest a new topic or modify one of the listed topics as well.

#	Application	Used public data
1	App for finding hospitals and pharmacies	Public data of hospital and pharmacy location
2	Weather forecasting app	Climate data
3	App for measuring the size of rooms	Room data of the certain address
4	Abandoned animals app	Data of abandoned animal in each shelter
5	Tourist attractions app	Public data of restaurant and attractions
6	Real-time Incheon Airport parking lot app	Traffic data of Incheon Airport

If your team selects a topic, then you need to clarify for developing a new system. Before analyzing and designing your system in detail (Project #2, Project #3), there can be many issues to be discussed and negotiated with your teammates. Based on the discussion results, write the following information on the report (no more than 3 pages).

1. **Subject application:** name of the application and the topic selected
2. **Application summary:** a brief description of your app
 - A. Target domain: the category of your app
(you can select 1~3 categories from [here](#))
 - B. Expected users: target user for your app (e.g. students, pet owners)
 - C. Description: motivating key ideas and originality of your app
3. **Public data summary:** a brief description of the one or more datasets or APIs you use
 - A. Summary: an explanation of the data
 - B. Source: a brief explanation of the source and available link
 - C. Usage: a method to access your data, such as downloading raw datasets or using an APIs of the data source
 - D. Suitability of the data: self-checkpoint 1(strongly uncertain) ~ 5(strongly certain)
 - **Make sure the data is appropriate for your project in terms of your topic, coding skills, availability, background knowledge, and understandings of the API if you use it.**
 - **TAs highly recommend you to download the datasets or use APIs in advance.**
4. **Functional issues (list):** required functions of your app or system components
 - Please do not miss important functionalities to be provided by your app
5. **Non-functional issues (list):** required quality attributes of your app
 - You can refer to the examples of non-functional requirements in Wikipedia (https://en.wikipedia.org/wiki/Non-functional_requirement)

*After the submission, TAs will give some feedback for each team if needed.
(Consulting Schedule: SEP. 20th, Please check the schedule table on KLMS)

https://docs.google.com/spreadsheets/d/16F4I9BeGtmn9L4VuKetr_pN_U0lcg9BxYITeOE98x4/edit?usp=sharing