# Öga
## *-What You See Is What I Need-*

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## What is Öga?

Öga is a location based Q&A service, where users' questions regarding a location are forwarded to other users at that location. It's name, meaning eye in Swedish(and happens to look like a face with set of eyes), implies the nature of the questions. It only requires a glance of an *eye* to answer the questions. The name also hints the service's nature, where questions and answers are "오고 가다"[*O-go Ga-da*] amongst users, a term meaning to and fro in Korean.

## Why Öga?

There are occasions when we want know some information about a place minutes before arriving. For example, you may want to know how many seats are available before entering a restaurant, a library or a cafe. But it is bothersome to call all candidate restaurants and ask whether there are enough seats. Or you may wonder the number of people waiting in line for a bus, before leaving home. Who should we ask then? The store owner in front of the bus stop?

Imagine you want to know how long Gwanak 02 bus waiting line is now as you approach NakSeong Station. If the line is long enough, we may want to ride a diffrent bus available at the next station. If you can correctly know the circumstance of destination, it would help in our decision making. Therefore we propose Öga, a location-based Q&A platform.

If you have a simple inquiry about a location, Öga connects you and the people who are at/near the location at the moment. You can ask them a simple question and get an answer. Above that, Öga will provide a slight sense of bonding, as the users share one thing in common: they will be in the same place sooner or later. Although anonymous, this feeling will encourage users to ask and answer questions.

## Who should use Öga?

Öga is for those who

- moves around a lot.
- want to get information about a place before visiting.
- like to help others by the glance of an eye and the touch of a finger.

## How does Öga do it?

Öga should provide reliable and fast answers, with answers and questions coming willingly from users. To achieve this, Öga should perform the following functions.

- Reliability Based Classification
  Users will be internally ranked by response time and reliability. Reliability will be calculated by the difference between user's answer and the consensus of users that responded. Based on this information, future questions will first be forwarded to users with fast response time and high reliability.

- Location Based Classification with Machine Learning
  Öga will forward questions to users staying at the location, and heading to the location, while not forwarding questions to users leaving the location. This allows better responses, as users leaving will not be able to give good answers. In order to achieve this, machine learning will be utilized. Machine learning techniques will be used to predict user's destination, under the assumption that the user has repetitive patterns. Given current position, position 5 minutes ago, the time of day, the week of the day, Öga will predict destinations to identify users who are leaving, staying, and arriving.

- Predict Answers with Machine Learning
  Öga can answer your question if there is no person present at the location, or questions are not answered. Based on past reponses, and number of active users in location, utilizing machine learning techniques, Öga will attempt to answer the questions if it can answer with certain confidence.

- Pictograms for Q&As
  We will simplify Öga's Q&A format by promoting pre built-in question and answers, represented as pictograms. Users can ask/answer a question quickly by just clicking the pictogram corresponding to their questions. For example, pictogram of a chair would mean if there are free seats, and a round circle would mean a positive. Öga's simple pictogram based UI will provide easy and intuitive experience to our users, prevent inappropriate inputs, and reduce localization issues.

- Karma System
  To reward users answering questions, Öga offers non-monetary incentives to its users. Users would see phrases like "you have helped ## wondering people". Moreover, based on number of times a user answers at the same location, achievements like "expert of *location*", "master of *location*" can be won.

## Öga should undergo

- Load & Stress Test
  Generate a large number of mock accounts to find bottlenecks and test performance of system when tested with a large quantity of concurrent users (when performance starts to slow down, breaking point, website crashes... etc.)

- Geolocation Test
  Test accuracy and efficiency of system in detecting and tracking the location of users based on wi-fi and geolocation APIs, ability of system to send out questions to correct pool of users (users in the right location etc.)

- Performance & Accuracy Test
  Test the ability of system to identify inaccurate or conflicting responses from users by creating mock accounts and purposefully feeding the system with wrong/conflicting information (1 user's answer different from 10 other users etc.)