Night Bus : Route Design Using Big Data

20201635 전찬

When we want to go home in midnight, we need to take taxi and there are no other options. Thus, night bus, called ‘Owl Bus’ is huge in Seoul citizens. It is affordable price and have regular time that make many people to move midnight more safely, cheaper. When implementing this night bus system, there are few goals to success. First one is by using Big Data, they need to make high bus usage in order to enhance user satisfaction and support night activities. Second, socially underprivileged, such as children, elderly, women, pregnant need safe transportation.

In planning, there are big data in Dasan call center, KT phone data. One of the important thing is that data companies such as Amazon, KT, Google need to protect their user’s information when using their data. Nowadays, this kind of data privacy is big issue in many countries. Because night bus is one of the public utilities / for public benefits, they can adapt KT personal data to implementing night bus routes.

After collecting data about population in midnight. We can make a kind of scatter about concentrated area of the floating population. By visualization, the greatest floating population at night time was in 홍대, 동대문, 신림, 강남, 종로, 가락시장, 신촌, 남부터미널, 건대, 압구정. Some of them are residential place, and others are business place. And by this data, we can implement optimization and simulation best routes that make high bus usage.

As a result, they implemented 9 routes of buses that make people comfortable to move in midnight. And this buses make 8.9% decrease of Taxi denial of passenger and 11% increase of Women transportation.