**English for Engineering I Final Assignment**

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| Name: | Naoki Kawahara |
| Student ID number: | 28G23027 |
| Email address: | u759573h@ecs.osaka-u.ac.jp |

**Abstract of graduation thesis**

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| In recent years, a large amount of personal data has been collected as big data, and the results of its analysis are used for various purposes. One way to utilize the large amount of data is to find the frequency corresponding to the most frequently occurring itemsets in the data set. However, since such data often contain personal privacy, privacy protection is necessary for data utilization. Differential privacy is one such measure. It is a technique to protect personal privacy by adding noise to the analyzed data. In general, differential privacy mechanisms involve a trade-off between privacy protection and data availability. DIP method is a differential privacy mechanism that can maintain both of privacy protection and of utility by maintaining the distribution of the data. In this study, we focus on the DIP method and propose a method that protects privacy and does not degrade the usefulness of frequency estimation. |