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| **Project Title:** | *a concise and meaningful title for the application* |
| **Lab Section Number:** | **L01** |
| **Student Names:** | *Kan Hailan, Kim Jihwan, Sembakutti Kalindu, Tao Haoyang, Ye Fang* |
| **Group Number:** | **01** |
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By virtue of submitting this document I electronically sign and date that the work being submitted is my own individual work.

**Abstract**

*Briefly describe the highlights of the proposal (the problem, the solution, the dataset and experiments for verification and validation). (max: 150 words) Hint: you will write the abstract last!*

**1. Objective**

*In one or two sentences summarize the objective of the project, i.e. what the project will accomplish.*

**2. Motivation**

*Clearly and concisely answer the following question:*

*What is the problem that motivates you to build this product?*

*Why is this problem important to be addressed?*

*Who are the users of the product?*

*What are the expected outcome and the utility of the product?*

**3. Prior Work**

*Briefly summarize similar products or solutions to your expected product. Describe any similarities and/or differences. How do you expect to improve the existing products? Make sure to use standard citation style when referring to other work. (max: 200 words)*

**4. Input/output and proposed solutions**

*You should include the following three items separately for this section:*

1. *Include the name and URLs of the dataset that you will be using (from Canada or US government open datasets or other sources). Add one sentence for each dataset describing why that dataset is needed.*
2. *Describe the outputs that your product will be generating in terms of the data and not the interface (e.g., Distance between point A and B, number of cured patients, etc.). For each output add one sentence description the output.*
3. *Briefly describe the proposed solution in terms of how the input will be used to generate the output. You can describe this part as a usage scenario. You may add a figure if it helps to describe how your proposed solution is working. (max 500 words)*

**5. Algorithmic challenges:**

*Briefly describe which algorithms (sorting, searching, graphs, strings, etc.) you think you will be implementing to solve this problem and what are the challenges that you should be aware of. (max 200 words)*

**6. Project plan**

*Include a table that describes at most 7 milestones and their deliverable for your project. Each milestone should have a specific date (e.g., Week 3).*

**References**

*You should have at least five references. Use a consistent format (IEEE, APA, etc.) for your references.*