

Project Justification

Problem Identification. For each iteration of your problem, please explain how you arrived at your identified problem.

For Iteration 1, I began with a rather broad question, which essentially asked: “What actions should the local authorities take to keep the people safe during the flood alert?” For Iteration 2 and 3, I provided more information for my problem, and I came up with four potential outcomes: either ask people to move a few Kilometres away from the dam for the time being or relocate the residents to a rehabilitation centre or request people to stay alert of rising river water. These three outcomes were derived from my Iteration 1 pattern recognition phase.

Decomposition. For each iteration where you decomposed an identified problem, please explain how this decomposition helped you solve your identified problem.

The decomposition phases were important for me in all three iterations. In Iteration 1, I identified four sub-problems that helped solve the larger problem. In Iteration 2, I identified one more sub-problem. In Iteration 3, I identified one last sub-problem. Together, all of these sub-problems were helpful because they focused in on specific aspects of my larger problem, and they all asked questions that were quantifiable.

Pattern Recognition. For each iteration where you recognized patterns in data, please explain how these patterns helped you solve your identified problem.

For this project, I utilized the pattern recognition phase in Iteration 1. This was an important phase because it allowed me to identify three potential outcomes: either ask people to move a few Kilometres away from the dam for the time being or relocate the residents to a rehabilitation centre or request people to stay alert of rising river water or provide medical support. Once I identified these three potential outcomes, the rest of the work was deciding how to choose the appropriate outcome.

Abstraction. For each iteration where you abstracted information, please explain how abstraction allowed you to solve your identified problem.

The abstraction phases were used in Iterations 2 and 3. In Iteration 2, the abstraction phase recognizes that knowing the expected amount of rainfall and current water level in the dam are important for local authorities to consider. In Iteration 3, the abstraction phase recognizes that knowing the number of elderly, disabled, children and pregnant women in the group is important information for me. These abstractions helped solve my

identified problem because it allowed me to focus on relevant information, while ignoring less important information.