



**Ahmedabad  
University**

## **CSE-523 Machine Learning**

### **Weekly Report-2**

Project Title : Use fuzzy logic to find direction of motion of a vehicle.

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During the first week of our research, our primary focus was to surf and make learn about the concept of fuzzy logic. Fuzzy logic is a mathematical approach that deals with reasoning that is approximate rather than precisely defined. It is a key concept in *artificial intelligence* and has widespread applications in various fields including *control systems, decision-making processes, and pattern recognition*.

### **Activities:**

#### Research Paper Review:

- We dedicated our first two days to review research papers that discuss fuzzy logic, and its applications in our project title. These papers provided valuable insights to build a strong base about the topic.

#### Surfing and Exploration:

- For the next one and half days in addition to literature review of the research paper, we utilized online resources to go deeper into the topic. This involved browsing through websites, online and educational platforms to gather information on fuzzy logic.

### **Key Learnings:**

- Fuzzy logic provides a flexible framework for handling uncertainty and vagueness in decision-making processes.

- We can implement fuzzy logic in real life problem of traffic management to make it more ideal or accurate
- Also it has wide applications ranging from control systems in engineering to natural language processing and expert systems in AI.

**Conclusion:**

The first week of our research journey was dedicated to laying a strong foundation in understanding fuzzy logic. Through exploration of research papers and online resources, coupled with insightful discussions, we have acquired a great understanding of fuzzy logic. In the next week we are planning to find a relevant dataset related to the problem.