

**SPL1 Project Proposal Form, 2022**  
**Institute of Information Technology (IIT)**  
**University of Dhaka**

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<p><b>Project Description:</b></p> <p style="text-align: center;">CLASSIFICATION &amp; REGRESSION ANALYSIS WITH DECISION TREE</p> <p>The aim of the project is to build classification and regression decision trees by understanding the fundamental concepts and mathematics behind decision trees. Here we will try to make a prediction model for various purpose by using decision tree. Decision tree mainly breaks down a dataset into smaller and smaller subsets. The final result is with decision with decision nodes and leaf nodes. In this project we have to use Decision Tree Induction Algorithm. Decision Tree itself is a supervised learning algorithm which is used to answer in true or false form.</p> <p><b>STEPS:</b></p> <ol style="list-style-type: none"><li>1. Define your main idea or question.</li><li>2. Add potential decision and outcome.</li><li>3. Expand until you hit points.</li><li>4. Calculate risk and reward.</li><li>5. Evaluate outcomes.</li></ol> <p><b>SCOPES:</b></p> <ol style="list-style-type: none"><li>1. Can handle both continuous and categorical variables.</li><li>2. Analyzing quantitative data and making a decision based on numbers.</li></ol>			
<p><b>Languages or Tools to be used</b></p> <p>C, C++, CODEBLOCKS, VISUAL STUDIO CODE, GIT, GITHUB</p>			
<p><b>Supervisor's Name:</b> <u><b>Dr. Naushin Nower</b></u></p> <p><b>Signature of the supervisor:</b> _____</p> <p><b>Date:</b> <u><b>04/01/2023</b></u></p>			