**MODEL DEVELOPMENT PHASE TEMPLATE**

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| Date | 12 July 2024 |
| Team ID | team-740102 |
| Project Title | Medical Cost Prediction |
| Maximum Marks | 5 Marks |

**Feature Selection Report Template**

Feature selection in medical cost prediction identifies key attributes impacting healthcare expenses. Important features include demographic information , health metrics , socioeconomic factors, and historical data. Behavioral aspects and mental health status are also considered. These features enable accurate cost predictions and better healthcare planning.

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| **Feature** | **Description** | **Selected(Yes/No)** | **Reasoning** |
| Age | The age of individual. | Yes | Medical costs often vary significantly with age due to different health needs and risks. |
| Sex | Gender of the individual (e.g., male, female). | Yes | There may be gender-specific health issues and cost implications. |
| Body Mass Index(BMI) | A measure of body fat based on height and weight. | Yes | High or low BMI can be associated with various health risks affecting medical costs. |
| Smoker | Whether the individual is a smoker (yes/no). | Yes | Smoking is a major risk factor for many diseases, increasing medical expenses. |
| Chronic Conditions | Presence of chronic conditions(e.g-diabetes, hypertension). | No | All conditions maynot lead to consistent medical costs. |
| Region | Geographic location of the individual (e.g., northeast, southeast). | Yes | Healthcare costs can vary by region due to differences in cost of living, availability of services, and regional health policies. |
| Diet | Dietary habits of the individual. | No | Diet quality maynot be always accurate on medical costs. |
| Number of Children | Number of dependents covered by the individual’s insurance plan. | Yes | More dependents can mean higher medical costs. |
| Charges/Expenses | Predicted Feature. | Yes | The value of total cost or expense should be calculated. |