**Model Development Phase Template**

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| Date | 22 June 2024 |
| Team ID | 739729 |
| Project Title | Disease Prediction Using Machine Leaning |
| Maximum Marks | 5 Marks |

**Feature Selection Report Template**

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

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| **Feature** | **Description** | **Selected (Yes/No)** | **Reasoning** |
| itching | Sensation on the skin that prompts scratching, it can be caused by allergic reactions | Yes | Common symptom indicating various skin conditions or allergies. |
| Muscle pain | Pain or discomfort in the muscles, often due to overexertion, injury, or infections like influenza. | Yes | Can indicate viral infections, muscle strains, or systemic illnesses. |

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| Shivering | Involuntary shaking or trembling, typically as a response to feeling cold or having a fever. | Yes | Often a sign of infection or fever. |
| Joint pain | Pain or discomfort in the joints, which can be due to arthritis, injury, or infections like viral or bacterial arthritis. | Yes | Important for diagnosing arthritis, viral infections, or autoimmune diseases. |
| Stomach pain | Pain or discomfort in the abdomen, which can be caused by a wide range of conditions including indigestion, infections, or inflammation. | Yes | Essential for diagnosing gastrointestinal disorders or infections. |
| Vomiting | The forceful expulsion of stomach contents through the mouth, often due to infections, food poisoning. | Yes | Indicates gastrointestinal issues, infections, or food poisoning |

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| Fatigue | Persistent feeling of tiredness or weakness, often due to lack of sleep | Yes | Common in many illnesses and can indicate chronic conditions |
| Weight loss | Unexplained reduction in body weight, which can be due  to various reasons including malnutrition, infection | Yes | Significant for diagnosing systemic illnesses, cancer, or metabolic disorders. |
| Restlessnes  s | Inability to stay due to anxiety, fever, or discomfort from  physical symptoms. | Yes | Indicates discomfort, fever, or psychological distress. |
| Lethargy | A state of tiredness or lack of energy | Yes | Signifies serious illnesses, infections, or chronic conditions. |
| High fever | Elevated body temperature typically above 38°C often a sign of infections. | Yes | Important for indicating severe infections or inflammatory conditions. |
| Headache | Pain in the head or upper neck region, which can be due to tension, migraines | Yes | Common symptom indicating various illnesses or conditions.  . |

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| Dark urine | Urine that appears darker than usual, which can indicate dehydration | Yes | Indicates liver or kidney issues, dehydration, or certain medications. |
| Nausea | Feeling of discomfort in the stomach with an urge to vomit, often due to infections, motion sickness. | Yes | Common symptom in gastrointestinal infections, pregnancy, or other conditions |
| Coma | State of prolonged unconsciousness where a person cannot be awakened, often due to severe head injury. | Yes | Indicates severe neurological or metabolic emergencies. |
| Constipatio n | Difficulty in passing stools or infrequent bowel  movements, often due to dehydration. | Yes | Common symptom indicating digestive issues or systemic disorders. |
| Abdominal | Pain or discomfort felt in the abdominal region, which can be due to digestive issues. | Yes | Essential for diagnosing gastrointestinal, reproductive, or systemic issues. |

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| Diarrhoea | Frequent passage of loose, watery stools, typically caused by infections. | Yes | Indicates gastrointestinal infections, inflammatory bowel disease, or food intolerances. |
| Mild fever | Slight elevation in body temperature, often seen in the early stages of infections. | No | Less specific compared to high fever in indicating serious infections. |
| Malaise | General feeling of discomfort, illness, or uneasiness, which can accompany  infections, chronic diseases, or fatigue. | Yes | Indicates general feeling of illness or discomfort. |
| Phlegm | Thick mucus secreted by the respiratory system, often seen during respiratory infections or allergies. | Yes | Indicates respiratory infections, allergies, or chronic conditions. |
| Congestion | Blockage or inflammation of nasal passages or airways, causing | Yes | Common in respiratory infections or allergies. |

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|  | difficulty in breathing. |  |  |
| Chest pain | Pain or discomfort felt in the chest area, which can be caused by heart conditions | Yes | Can indicate serious cardiac issues, respiratory problems, or musculoskeletal disorders. |
| Fast heart rate | Elevated heart rate , often due to stress, fever, dehydration, or cardiovascular conditions. | Yes | Important for diagnosing cardiac issues, infections, or metabolic disorders. |
| Neck pain | Pain or discomfort in the neck region, often due to muscle strain, injury, or infections like meningitis. | Yes | Can indicate musculoskeletal issues, infections, or neurological problems. |
| Dizziness | Feeling lightheaded, unsteady, or faint, which can be due to various causes including  inner ear problems | Yes | Common symptom indicating various conditions including inner ear disorders, dehydration, or neurological issues. |

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| Belly pain | Pain or discomfort in the abdominal area, similar to abdominal pain | No | Vague term compared to abdominal pain, which is more specific. |
| Knee pain | Pain or discomfort in the knee joint, which  can be caused by injury, arthritis, or overuse. | Yes | Important for diagnosing arthritis, injuries, or infections. |
| Muscle weakness | Reduced strength in muscles, which can be due  to various reasons including lack of exercise. | Yes | Indicates neuromuscular disorders, metabolic issues, or systemic illnesses. |
| Passage of gases | Excessive production or expulsion of gas from the digestive system, commonly  associated with bloating or flatulence. | No | Often a normal bodily function unless associated with other symptoms. |
| Irritability | Feeling easily annoyed or agitated, which can be due to stress, hormonal changes | Yes | Indicates psychological distress, infections, or hormonal imbalances. |

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| Continuous sneezing | Repeated and frequent sneezing episodes, often due to allergies,  colds | No | Often due to allergies or irritants, not typically a primary indicator of serious illness. |
| Puffy face and eyes | Swelling or puffiness around the face and eyes, which can be due to allergies | Yes | Indicates allergies, infections, or autoimmune disorders. |
| Abnormal menstruati on | Irregularities in menstrual cycles such as heavy bleeding, missed periods | Yes | Important for diagnosing hormonal imbalances, pregnancy, or gynecological issues. |
| Increased appetite | Noticeable increase in hunger or desire for food, which can be due to hormonal changes | No | Can be a normal variation or due to nonmedical factors. |
| Lack of concentrati on | Difficulty focusing or paying attention, which can be due to stress, fatigue | Yes | Indicates cognitive issues, stress, or neurological conditions. |
| Visual disturabanc es | Changes or disruptions in vision. | Yes | Indicates eye problems or neurological issues. |

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| Receiving blood transfusion | Process of receiving donated blood, typically done to replenish blood loss from surgery, injury. | No | Procedure rather than a symptom; not relevant to clinical symptomatology. |
| Pain behind the eyes | Aching or discomfort felt behind one or both eyes, often associated with sinusitis, eye strain. | Yes | Can indicate eye strain, sinusitis, or neurological issues. |
| History of alcohol consumptio n | Past record of consuming alcoholic beverages, relevant for assessing potential liver disease, addiction, or overall health risks. | Yes | Not a symptom but relevant in certain medical contexts. |
| Blood in sputum | Presence of blood in mucus coughed up from the respiratory tract, which can indicate infections, lung conditions, or trauma. | Yes | Indicates serious respiratory infections, lung diseases, or trauma. |
| Yellowing of eyes | Jaundice, a condition where the eyes and skin turn yellow due to elevated bilirubin levels | Yes | Indicates liver dysfunction or jaundice. |
| Palpitation s | Sensation of rapid, fluttering, or pounding heartbeats, often due to stress, caffeine intake, or heart conditions. | Yes | Indicates cardiac arrhythmias, stress, or hormonal imbalances. |
| Inflammato  ry nails | Changes in nails such as redness, swelling, or pain, which can indicate infections,  autoimmune disorders, or trauma. | Yes | Indicates infections, autoimmune disorders, or systemic illnesses. |
| Yellow crust ooze | Discharge from wounds or skin lesions that is yellow in color, which can indicate infection or inflammatory skin conditions. | Yes | Indicates skin infections or inflammatory skin conditions. |