

**Model Development Phase –**

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| Date | 21 JUNE 2025 |
| Team ID | SWTID1749896042 |
| Project Title | Unemployed Insurance Beneficiary Forecasting |
| Maximum Marks | 5 Marks |

**Feature Selection Report –**

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** |
| Record\_ID | Unique identifier for each record | No | Not predictive; serves only as identifier |
| Week\_Number | Sequential week index | Yes | Captures temporal order & seasonality |
| Prev\_Week\_Claims | Claims in previous week (lag-1) | Yes | Strong autocorrelation with current week claims |
| Unemployment\_Rate | Official unemployment % | Yes | Key macro‑indicator influencing new claims. |
| Job\_Openings\_Rate | Vacancies per 100 workers | Yes | Inverse relationship with claims volume |
| GDP\_Growth | Quarter‑on‑quarter GDP growth % | Yes | Captures broader economic expansion/contraction |
| CPI\_Inflation | Consumer Price Index YoY % | Yes | Economic stress signal affecting layoffs |
| Population | Regional population size | Yes | Normalises claims per capita, controls scale |
| Region | State/region categorical code | Yes | Accounts for structural geographic differences |