

Scenario 1: Predicting Move-in Date

The algorithm was trained on **21,549** observations derived from date of birth (DOB) data in the **Birthdate** dataset to predict **EVENT_DATE** in the **MoveIn** dataset. A Random Forest model was employed for this task. The prediction accuracy was evaluated with a margin of error of ± 30 days. When tested on a separate set of **5,385** observations, the model achieved an accuracy of **83.5%** within the specified error range.

Scenario 2: Predicting Move-in Premise

The algorithm was trained on **21,549** observations using the **SOURCE_ACCOUNT** data from the **Birthdate** dataset to predict **DEST_ACCOUNT** in the **MoveIn** dataset.. A Random Forest model was utilized for this task. The training data included **5** distinct **SOURCE_ACCOUNT** values and **5** distinct **DEST_ACCOUNT** values. When evaluated on a separate set of **5,385** observations, the model achieved a prediction accuracy of approximately **93.47%**.