

# Analysis Report

## Global dataset report

This report is the output of the Amazon SageMaker Clarify analysis. The report is split into following parts:

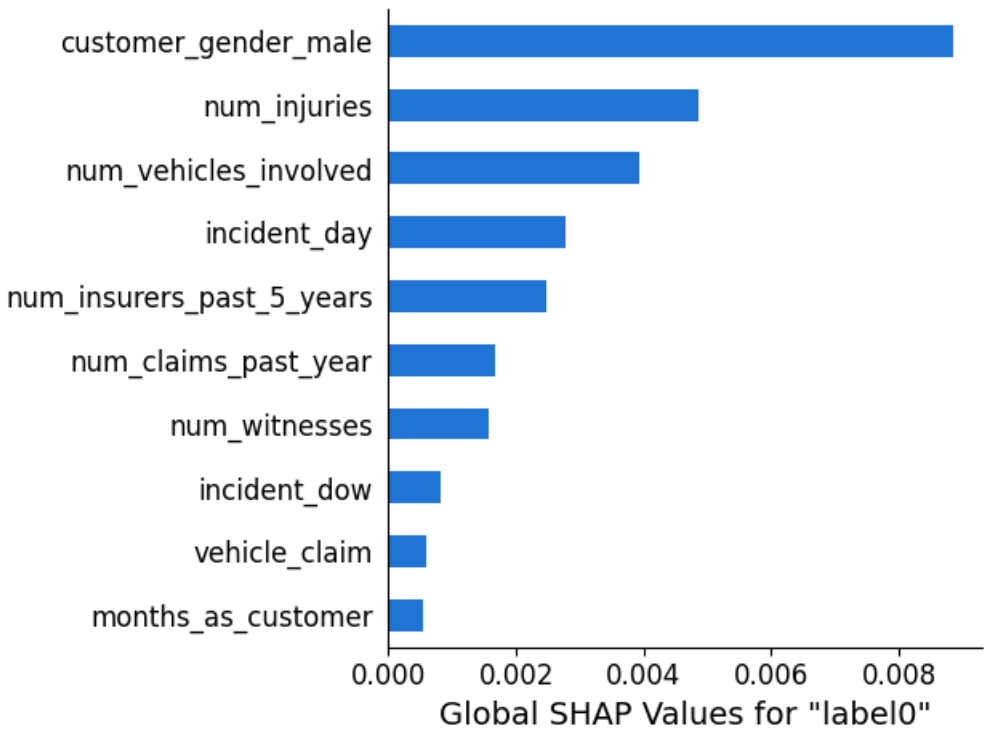
- 1. Model explanations

### Model explanations

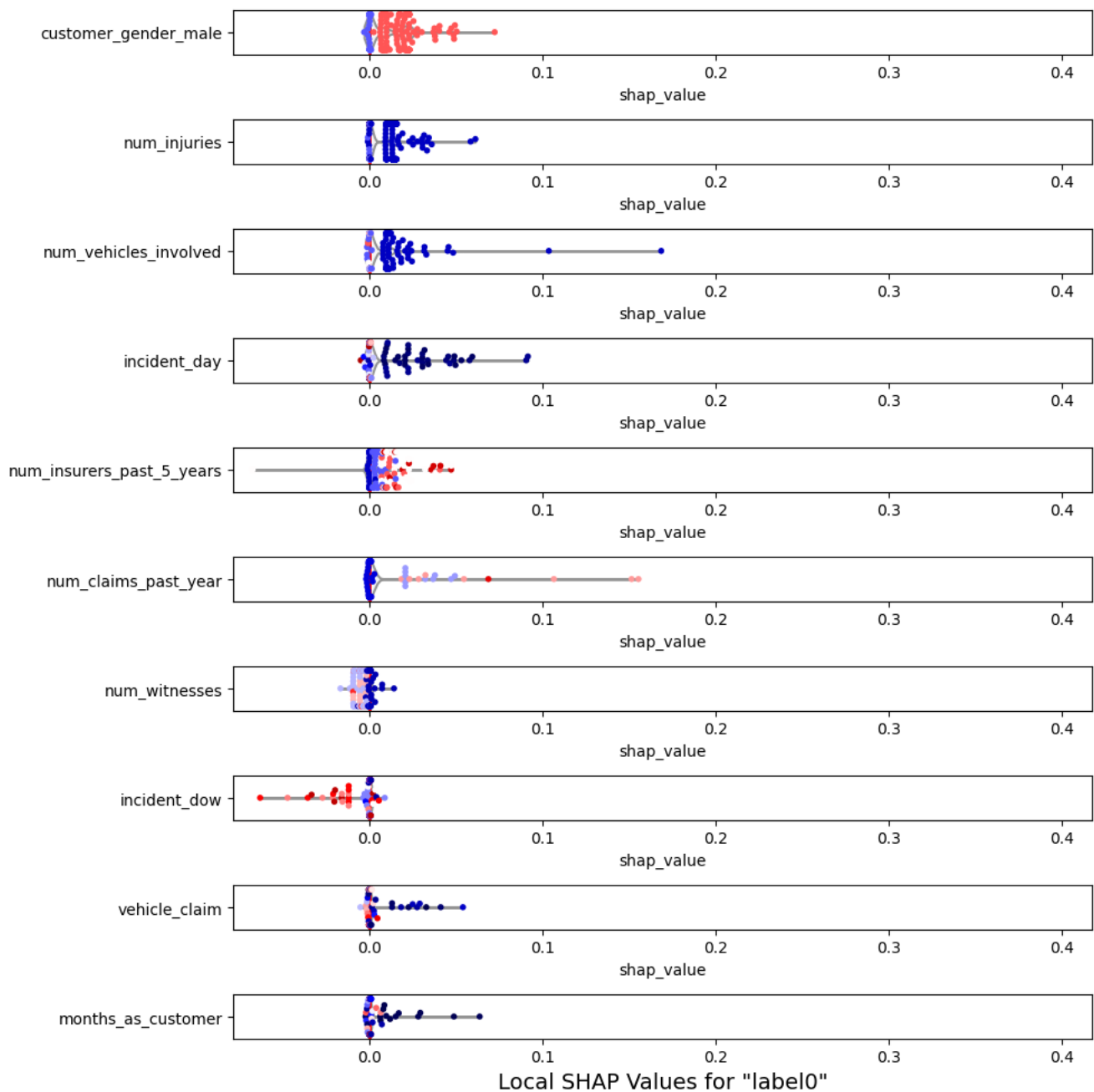
#### SHAP Explanations for individual labels

The model has 48 features.

We computed KernelSHAP explanations on the dataset. For each label, we display the 10 features with the greatest feature attribution. You have 1 label(s).



In the chart below, each point in the plot denotes an individual instance being explained. x-axis shows the SHAP value for the corresponding instance and feature. The red-blue color scale shows the value of the feature itself. Red indicates higher values whereas blue indicates lower values.



## Appendix: Analysis Configuration Parameters

```
{
  "dataset_type": "text/csv",
  "headers": [
    "fraud",
    "num_vehicles_involved",
    "num_injuries",
    "num_witnesses",
    "police_report_available",
    "injury_claim",
    "vehicle_claim",
    "total_claim_amount",
    "incident_month",
    "incident_day",
    "incident_dow",
    "incident_hour",
    "customer_age",
    "months_as_customer",
    "num_claims_past_year",

```

```

    "num_insurers_past_5_years",
    "policy_deductable",
    "policy_annual_premium",
    "policy_liability",
    "customer_education",
    "auto_year",
    "driver_relationship_other",
    "driver_relationship_child",
    "driver_relationship_spouse",
    "driver_relationship_na",
    "driver_relationship_self",
    "incident_type_collision",
    "incident_type_break-in",
    "incident_type_theft",
    "collision_type_rear",
    "collision_type_side",
    "collision_type_na",
    "collision_type_front",
    "incident_severity_totaled",
    "incident_severity_major",
    "incident_severity_minor",
    "authorities_contacted_fire",
    "authorities_contacted_none",
    "authorities_contacted_police",
    "authorities_contacted_ambulance",
    "policy_state_ca",
    "policy_state_az",
    "policy_state_nv",
    "policy_state_id",
    "policy_state_wa",
    "policy_state_or",
    "customer_gender_other",
    "customer_gender_male",
    "customer_gender_female"
  ],
  "label": "fraud",
  "predictor": {
    "model_name": "fraud-detect-xgb-model",
    "instance_type": "ml.m4.xlarge",
    "initial_instance_count": 1,
    "accept_type": "text/csv"
  },
  "methods": {
    "report": {
      "name": "report",
      "title": "Analysis Report"
    },
    "shap": {
      "use_logit": false,
      "save_local_shap_values": true,
      "baseline": [
        2.1085058618109254,
        0.5584933898727862,
        0.8685457720129708,
        0.4220503866300823,
        24257.121476677476,
        17169.351123437555,
        41426.472600115034,
        6.726365677226241,
        15.585682215016213,
        2.645048640558743,
        11.722624095784484,
        44.15714642055375,
        98.60688450985283,
        0.08730356697430781
      ]
    }
  }
}

```

0.007500000000000001,  
1.4130705911698678,  
751.0725866799701,  
2925.3305063606886,  
1.118233973559491,  
2.531304564729359,  
2015.7251184834124,  
0.04065851833374907,  
0.04489897730107259,  
0.08505861810925418,  
0.14342728860064854,  
0.6859565976552756,  
0.8565727113993514,  
0.09553504614617112,  
0.04789224245447742,  
0.21900723372412073,  
0.21052631578947367,  
0.14342728860064854,  
0.427039161885757,  
0.23547019206784733,  
0.34846595160888,  
0.41606385632327264,  
0.024195559990022448,  
0.2432027937141432,  
0.7031678722873534,  
0.029433774008480917,  
0.6303317535545023,  
0.107009229234223,  
0.04190571214766775,  
0.027937141431778497,  
0.12297331005238214,  
0.06984285357944625,  
0.0177101521576453,  
0.4622100274382639,  
0.43576951858318785

```
    ]  
  ],  
  "num_samples": 500,  
  "agg_method": "mean_abs"  
}  
}
```