*BakingSoDA Experiment Report*

*Generated by : test1*

*Generated on : 2020-01-12\_20:44:32*

# Experiment Overview

# Data Overview

This section provides information on the datasets used for the experiment.

|  |  |  |
| --- | --- | --- |
| **Data** | **Train data** | **Valid data** |
| lendingclub\_binary\_before | 941794 rows, 23 columns | 403516 rows, 23 columns |
| lendingclub\_binary\_after | 941794 rows, 145 columns | 403516 rows, 145 columns |

# Experiment Settings

Below are the settings selected for the experiment by agilesoda. The Defined Parameters represent the high-level parameters; the Config Overrides represent the fine-control parameters

**Input Setting**

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Target column | ['charged\_off'] |
| PK column | [] |
| Standardize | normal |
| Fill na | gan |

**General Setting**

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Problem | classification |
| Algorithm | a2gan |
| GPU | [0, 1] |
| Action type | category |

**Metric Setting**

|  |  |
| --- | --- |
| **Setting** | **Value** |
| Reward column | [] |

# Parameter Setting

**Actor Parameter Setting**

|  |  |
| --- | --- |
| **Parameter** | **Value** |
| Network Architecture | mlp |
| Hidden Activation | selu |
| Hidden Layer | [128, 128] |
| Bias | False |
| Dropout Ratio | 0.0 |
| Learning Rate | 1e-05 |
| Optimizer | adam |
| Initializer | lecun\_normal |

**Critic Parameter Setting**

|  |  |
| --- | --- |
| **Parameter** | **Value** |
| Loss Function | smoothl1 |
| Network Architecture | mlp |
| Hidden Activation | selu |
| Hidden Layer | [128, 128] |
| Bias | False |
| Dropout Ratio | 0.0 |
| Learning Rate | 1e-05 |
| Optimizer | adam |
| Initializer | lecun\_normal |

**Other Parameter Setting**

|  |  |
| --- | --- |
| **Parameter** | **Value** |
| Iteration | 5000 |
| Gamma | 0.0 |
| Entropy Ratio | 0.0 |
| Exploration Rate | [2000.0, 1.0] |
| Algorithm | a2gan |
| Batch Size | 1000 |
| Aug Ratio | [0.9, 0.1] |
| Save Name | test1 |
| Save Period | 100 |
| Visualize Period | 100 |
| Seed | 1234 |
| Visualize | True |
| Evaluation Metrics | ['reward', 'confusion\_matrix', 'auc', 'accuracy', 'f1'] |

# Train / Valid model performance

This section provides performance of train and valid.

You select metric : ['reward', 'confusion\_matrix', 'auc', 'accuracy', 'f1']

**Best train\_reward model : 0.0**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **accuracy** | **auc** | **f1** | **reward** |
| Train | 0.747582 | 0.479798 | 0.096985 | 0.000000 |
| Valid | 0.746719 | 0.482374 | 0.099335 | 0.000000 |
| Test | 0.7473229218544425 | 0.48057400384741555 | 0.09769253025352173 | 0.0 |

**Best valid\_reward model : 0.0**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **accuracy** | **auc** | **f1** | **reward** |
| Train | 0.747582 | 0.479798 | 0.096985 | 0.000000 |
| Valid | 0.746719 | 0.482374 | 0.099335 | 0.000000 |
| Test | 0.7473229218544425 | 0.48057400384741555 | 0.09769253025352173 | 0.0 |

**Best train\_auc model : 4999.0**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **accuracy** | **auc** | **f1** | **reward** |
| Train | 0.802406 | 0.710333 | 0.068795 | 0.000000 |
| Valid | 0.801482 | 0.710373 | 0.066669 | 0.000000 |
| Test | 0.8021288773591216 | 0.7103451933451235 | 0.06815604127868714 | 0.0 |

**Best valid\_auc model : 4999.0**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **accuracy** | **auc** | **f1** | **reward** |
| Train | 0.802406 | 0.710333 | 0.068795 | 0.000000 |
| Valid | 0.801482 | 0.710373 | 0.066669 | 0.000000 |
| Test | 0.8021288773591216 | 0.7103451933451235 | 0.06815604127868714 | 0.0 |

**Best train\_accuracy model : 4600.0**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **accuracy** | **auc** | **f1** | **reward** |
| Train | 0.802485 | 0.709954 | 0.078252 | 0.000000 |
| Valid | 0.801641 | 0.710058 | 0.076986 | 0.000000 |
| Test | 0.8022321992700567 | 0.709985009655828 | 0.07787139505141633 | 0.0 |

**Best valid\_accuracy model : 4600.0**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **accuracy** | **auc** | **f1** | **reward** |
| Train | 0.802485 | 0.709954 | 0.078252 | 0.000000 |
| Valid | 0.801641 | 0.710058 | 0.076986 | 0.000000 |
| Test | 0.8022321992700567 | 0.709985009655828 | 0.07787139505141633 | 0.0 |

**Best train\_f1 model : 0.0**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **accuracy** | **auc** | **f1** | **reward** |
| Train | 0.747582 | 0.479798 | 0.096985 | 0.000000 |
| Valid | 0.746719 | 0.482374 | 0.099335 | 0.000000 |
| Test | 0.7473229218544425 | 0.48057400384741555 | 0.09769253025352173 | 0.0 |

**Best valid\_f1 model : 0.0**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **accuracy** | **auc** | **f1** | **reward** |
| Train | 0.747582 | 0.479798 | 0.096985 | 0.000000 |
| Valid | 0.746719 | 0.482374 | 0.099335 | 0.000000 |
| Test | 0.7473229218544425 | 0.48057400384741555 | 0.09769253025352173 | 0.0 |

**Train Confusion Matrix**

|  |  |  |
| --- | --- | --- |
|  | **Positive** | **Negative** |
| **Positive** | 748827.0 | 5129.0 |
| **Negative** | 180964.0 | 6874.0 |

**Valid Confusion Matrix**

|  |  |  |
| --- | --- | --- |
|  | **Positive** | **Negative** |
| **Positive** | 320550.0 | 2245.0 |
| **Negative** | 77860.0 | 2861.0 |

# Plot about Train

