

# AutoCompete

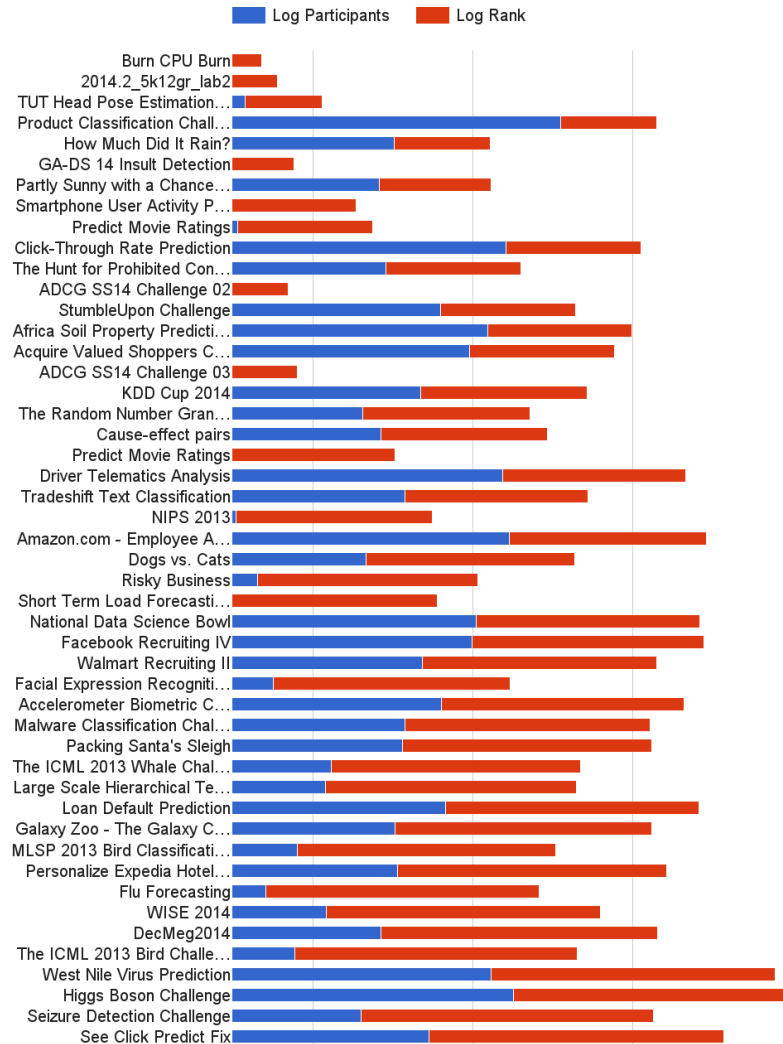
## A Framework for Machine Learning Competitions

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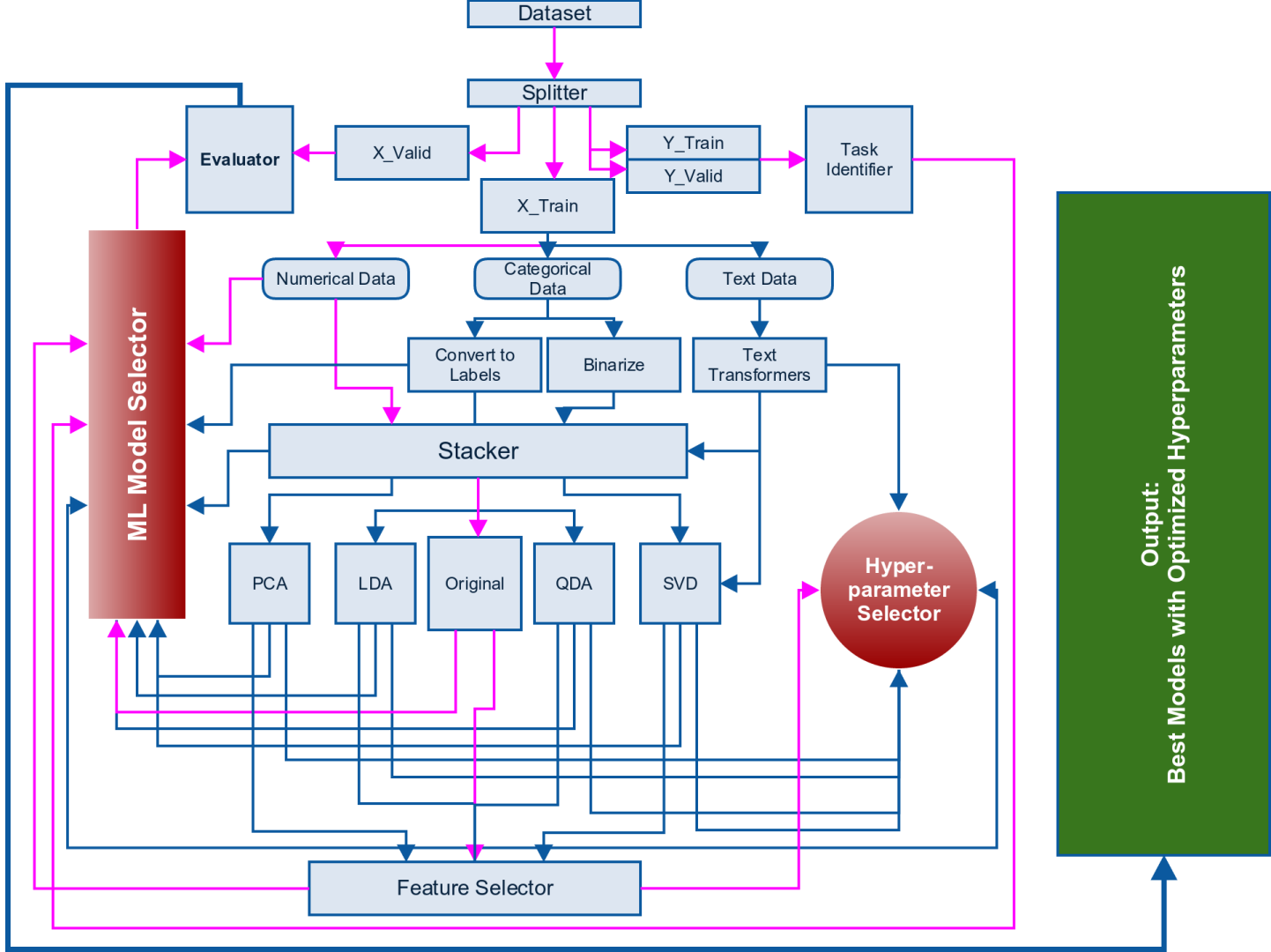
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- Framework developed from ML competitions
- 100+ competitions
- Selective pipelines
- Pre-defined hyper-parameters
- Comparable results



# The Framework



## AutoML Phase-0

| RESULTS |                       |          |             |            |            |            |             |
|---------|-----------------------|----------|-------------|------------|------------|------------|-------------|
|         | User                  | <Rank>   | Set 1       | Set 2      | Set 3      | Set 4      | Set 5       |
| 1       | ideal.intel.analytics | 1.40 (1) | 0.8262 (1)  | 0.8132 (2) | 0.9632 (2) | 0.8877 (1) | 0.5894 (1)  |
| 2       | abhishek4             | 3.60 (2) | 0.8178 (4)  | 0.7924 (4) | 0.9394 (5) | 0.8716 (2) | 0.4608 (3)  |
| 3       | aad_freiburg          | 4.00 (3) | 0.8172 (6)  | 0.8107 (3) | 0.9751 (1) | 0.8580 (5) | 0.3958 (5)  |
| 4       | asml.intel.com        | 7.40 (4) | 0.8238 (3)  | 0.8172 (1) | 0.9551 (3) | 0.8484 (6) | 0.3324 (24) |
| 5       | Rong                  | 7.60 (5) | 0.8136 (10) | 0.7851 (7) | 0.8740 (8) | 0.8704 (3) | 0.3367 (10) |

## Newsgroup-20

| Algorithm          | Weighted Average F1 Score |
|--------------------|---------------------------|
| <b>AutoCompete</b> | <b>0.864</b>              |
| hyperopt-sklearn   | 0.856                     |
| SVM Torch          | 0.848                     |
| LibSVM             | 0.843                     |

## MNIST

| Algorithm          | Accuracy Score |
|--------------------|----------------|
| Convnets           | 99.8%          |
| hyperopt-sklearn   | 98.7%          |
| libsvm grid-search | 98.6%          |
| <b>AutoCompete</b> | <b>96%</b>     |



## Future:

- More Pipelines
- SMAC
- TPE
- GGA

# Thank You!

