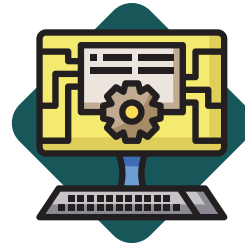




# KEY ADVANTAGES



Cost savings on SAS Licensing.



Atleast 3x-10x increase in speed of conversion.



Automated conversion saves significant time and money and lets you focus on business value and strategy rather than the manual work over months/years.



Ability to upskill existing data scientists to the new age of AI dominated by Python based technologies.



Cloud Migration is a breeze with our in-built support for all 3 public cloud platforms as well as other platforms.

## PHASES OF MIGRATION

### ANALYZE

Analyze, summarize and catalog SAS code

### VALIDATE

Test the generated Python code and compare with current SAS code output.

### DEPLOY

Job Orchestration, Support

### CONVERT

Generate Pandas & PySpark code

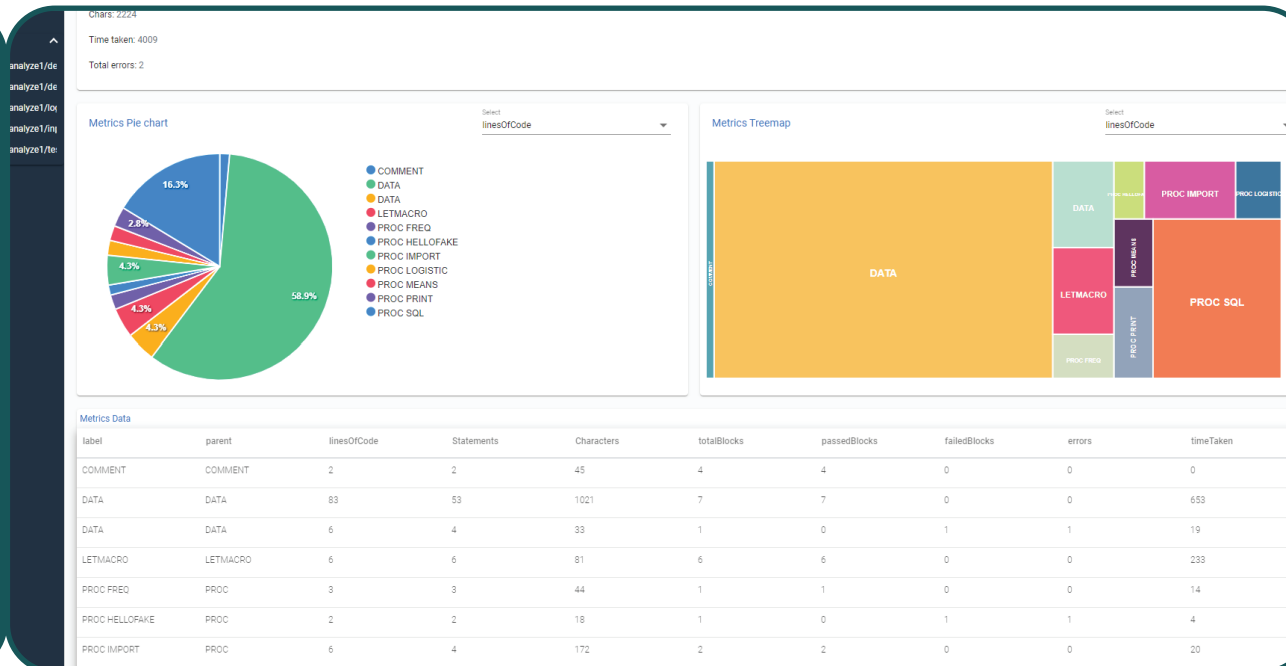
### INTEGRATE

Cloud integration, database connectivity, inputs & outputs

# POWERFUL USER INTERFACES FOR FAST SEAMLESS MIGRATION



**ANALYZER**  
provides SAS  
code assesment  
as well as the  
metrics on  
conversion



```

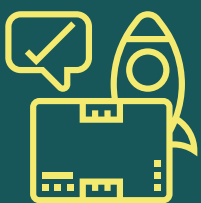
demo_scoredata.sas X example2.sas
> demo_scoredata.sas
1
2 proc import datafile = "../data/score_data_miss.csv"
3 DBMS = csv out = scoredata0 replace ;
4 run;
5
6 data scoredata1;
7 set scoredata0;
8 TotalScore = score1 + score2 + score3;
9 AverageScore = TotalScore / 3;
10 run;
11 PROC FORMAT;
12 VALUE $genderf 'm' = 'Male'
13 'f' = 'Female';
14 VALUE asgroup 0-<60 = 'f'
15 60-<70 = 'd'
16 70-<80 = 'c'
17 80-<90 = 'b'
18 90-High = 'a'
19 Other = 'Missing';
20 run;
21
22 PROC PRINT DATA = scoredata1;
23 FORMAT gender $genderf. AverageScore asgroup.;
24 TITLE 'Results Printed with User-Defined Formats';
25 RUN;
26
27
28 proc means data=scoredata1 n nmiss mean min max std var;
29 var score1 score2 score3 TotalScore;
30 run;
31
32 proc freq data=scoredata1;
  
```

```

_tmppythonCode.py X example1.sas
_tmppythonCode.py > ...
1310
1311 #-----Passed START BlockNum: 13, SAS Lines: 86 to
1312 START_BLOCK('Passed', 13)
1313 mapDFs = {}
1314 is_first_call = True
1315
1316 def scoredata3_func(row):
1317     global is_first_call
1318     if is_first_call:
1319         is_first_call = False
1320         return row
1321     if _gks['mode'] == 1:
1322         row['score1'] = row['score1'] + 10
1323         if row['score1'] >= 90:
1324             row['pass'] = 'Distinction'
1325     else:
1326         row['score1'] = row['score1'] + 10
1327         if row['score1'] >= 80:
1328             row['pass'] = 'OK'
1329         row['b'] = 2
1330     return row
1331
1332 scoredata3 = scoredata2.apply(scoredata3_func, axis=
1333 # showDF(scoredata3)
1334 END_BLOCK('Passed', 13)
1335 #-----Passed END BlockNum: 13-----
1336
1337
1338
  
```



**CONVERTER**  
IDE enables full  
development  
mode conversion  
and execution.  
Addons and  
integrations take  
the workload to  
hyper drive.



**JUPYTER**  
brings in a  
powerhouse of  
python code  
execution

jupyter demo\_scoredata\_pyspark Last Checkpoint: 01/13/2021 (unsaved changes) Logout

File Edit View Insert Cell Kernel Widgets Help Not Trusted Kernel O

```

run;

In [ ]:

#%%

#-----Passed START BlockNum: 13, SAS Lines: 86 to 97, Errors: 0, LOC: 12, Time: 142-----
START_BLOCK('Passed', 13)

mapDFs = {}

def scoredata3_func(row):
    if _gks['mode'] == 1:
        row['score1'] = row['score1'] + 10
        if row['score1'] >= 90:
            row['pass'] = 'Distinction'
    else:
        row['score1'] = row['score1'] + 10
        if row['score1'] >= 80:
            row['pass'] = 'OK'
        row['b'] = 2
    return row

rdd_out = scoredata2.rdd.map(
    lambda row: row.asDict().map(
        lambda row: scoredata3_func(row))
scoredata3 = spark.createDataFrame(rdd_out, samplingRatio=1)
# showDF(scoredata3)
  
```

# TIERS

# SCALABLE, COLLABORATIVE, & DOCKERIZED IDE

## CONVERT (STANDARD)

### BASIC

Conversion to Pandas  
Conversion to PySpark  
Jupyter Notebook  
Python PEP8 Code

### TESTING & VALIDATION

Test Data Generation

### SUPPORT

Software updates  
Email & Slack support

## INTEGRATED (PREMIUM)

### BASIC

Conversion to Pandas  
Conversion to PySpark  
Jupyter Notebook  
Python PEP8 Code  
HTML Doc Generation

### ADVANCED

Code Analyzer  
Code versioning & Auditing

### SUPPORT

Software updates  
Email & Slack support  
Tier2 support

### TESTING & VALIDATION

Test Data Generation  
Data Sampler

### INTEGRATIONS

AWS  
Azure  
Google Cloud  
Oracle Cloud  
Dataiku  
Databricks  
Data Robot  
RDBMS (Teradata, DB2, Mysql, Oracle,  
SQL server)  
Hive

## UNIFY (ENTERPRISE)

### BASIC

Conversion to Pandas  
Conversion to PySpark  
Jupyter Notebook  
Python PEP8 Code  
HTML Doc Generation

### ADVANCED

Code Analyzer  
Code versioning & Auditing  
Data Lineage in SAS code

### SUPPORT

Software updates  
Email & Slack support  
Tier2 support  
Tier1 support  
Engineering Support

### TESTING & VALIDATION

Test Data Generation  
Data Sampler  
VFX (Validation Framework)

### INTEGRATIONS

AWS  
Azure  
Google Cloud  
Oracle Cloud  
Dataiku  
Databricks  
Data Robot  
Custom  
RDBMS (Teradata, DB2, Mysql, Oracle,  
SQL server)  
Hive  
NoSQL (Redshift, Snowflake)

## CONTACT US

## BETTER YET, GET A DEMO AND A NO OBLIGATION POC !

Try the code analyzer and see if this could be a solution for you risk-free and cost-free!

### BLUE WHALE

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SAS2PY