

```
!which python
```

```
/Users/helenmasson/opt/anaconda3/envs/secCellFIE/bin/python
```

```
### Import Packages
import ddot
from ddot import Ontology
import numpy as np
import ndex2
import networkx as nx
import pandas as pd
import time
```

```
from openpyxl import load_workbook
fileLoc="Output/HPA_bicor.csv"
HPA_bicor=pd.read_csv(fileLoc, index_col=0)
print(HPA_bicor.shape)
HPA_bicor.head()
```

	DPM1	FUCA2	HS3ST1	ARF5	COPZ2	CREBBP	TRAPPC6A	PIGQ	PSMB1	CYTH3	...	HS3ST5	PDCD6
DPM1	1.000000	0.296410	0.163974	0.148747	0.427291	0.153659	-0.141271	0.195740	0.364809	0.113228	...	-0.090495	-0.243304
FUCA2	0.296410	1.000000	-0.100551	-0.122180	0.334045	-0.110937	-0.040667	0.229530	0.212463	0.043204	...	-0.064807	0.036258
HS3ST1	0.163974	-0.100551	1.000000	0.177354	0.016393	-0.083081	0.018695	0.134998	0.077837	0.018783	...	-0.015332	0.220172
ARF5	0.148747	-0.122180	0.177354	1.000000	0.004611	-0.095113	0.212683	0.032615	0.383776	-0.032481	...	0.018565	0.270019
COPZ2	0.427291	0.334045	0.016393	0.004611	1.000000	0.209359	-0.237407	0.182450	0.163944	0.453471	...	0.114427	-0.276791

5 rows × 882 columns

## Run CliXO

```
start = time.time()
ont= Ontology.run_cliXO(HPA_bicor, alpha=0.4, beta=0.5, square=True, square_names=list(HPA_bicor.columns), timeout = 50000)
end = time.time()
print(end - start)
```

```
-----
EmptyDataError                                Traceback (most recent call last)
```

```
~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/ddot/Ontology.py in from_table(cls, table, parent, child, is_mapping, mapping, mapping_parent, mapping_child, header, propagate, verbose, cliXO_format, clear_default_attr, **kwargs)
```

```
1605         try:
-> 1606             table = pd.read_table(table, comment='#', header=header)
1607         except:
```

```
~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/pandas/io/parsers.py in read_table(filepath_or_buffer, sep, delimiter, header, names, index_col, usecols, squeeze, prefix, mangle_dupe_cols, dtype, engine, converters, true_values, false_values, skipinitialspace, skiprows, skipfooter, nrows, na_values, keep_default_na, na_filter, verbose, skip_blank_lines, parse_dates, infer_datetime_format, keep_date_col, date_parser, dayfirst, cache_dates, iterator, chunksize, compression, thousands, decimal, lineterminator, quotechar, quoting, doublequote, escapechar, comment, encoding, dialect, error_bad_lines, warn_bad_lines, delim_whitespace, low_memory, memory_map, float_precision)
```

```
766         sep = ","
--> 767         return read_csv(**locals())
768
```

```
~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/pandas/io/parsers.py in read_csv(filepath_or_buffer, sep, delimiter, header, names, index_col, usecols, squeeze, prefix, mangle_dupe_cols, dtype, engine, converters, true_values, false_values, skipinitialspace, skiprows, skipfooter, nrows, na_values, keep_default_na, na_filter, verbose, skip_blank_lines, parse_dates, infer_datetime_format, keep_date_col, date_parser, dayfirst, cache_dates, iterator, chunksize, compression, thousands, decimal, lineterminator, quotechar, quoting, doublequote, escapechar, comment,
```

```

encoding, dialect, error_bad_lines, warn_bad_lines, delim_whitespace, low_memory, memory_map, float_precision)
687
--> 688     return _read(filepath_or_buffer, kwds)
689

~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/pandas/io/parsers.py in _read(filepath_or_buffer, kwds)
453     # Create the parser.
--> 454     parser = TextFileReader(fp_or_buf, **kwds)
455

~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/pandas/io/parsers.py in __init__(self, f, engine, **kwds)
947
--> 948     self._make_engine(self.engine)
949

~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/pandas/io/parsers.py in _make_engine(self, engine)
1179     if engine == "c":
-> 1180         self._engine = CParserWrapper(self.f, **self.options)
1181     else:

~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/pandas/io/parsers.py in __init__(self, src, **kwds)
2009
-> 2010     self._reader = parsers.TextReader(src, **kwds)
2011     self.unnamed_cols = self._reader.unnamed_cols

pandas/_libs/parsers.pyx in pandas._libs.parsers.TextReader.__cinit__()

EmptyDataError: No columns to parse from file

During handling of the above exception, another exception occurred:

AssertionError                                Traceback (most recent call last)

<ipython-input-44-34e0fab8da58> in <module>
      1 start = time.time()
----> 2 ont= Ontology.run_clixo(HPA_bicor, alpha=0.4, beta=0.5, square=True, square_names=list(HPA_bicor.columns), timeout = 50000)
      3 end = time.time()
      4 print(end - start)

~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/ddot/Ontology.py in run_clixo(cls, graph, alpha, beta, newman_modularity, miyauchi_m
odularity, stop_score, min_dt, timeout, square, square_names, output, output_log, clixo_cmd, clixo_version, verbose, debug)
3408         clixo_version=clixo_version,
3409         verbose=verbose,
-> 3410         debug=debug)
3411     finally:
3412         if delete_output:

~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/ddot/Ontology.py in run_clixo(cls, graph, alpha, beta, newman_modularity, miyauchi_m
odularity, stop_score, min_dt, timeout, square, square_names, output, output_log, clixo_cmd, clixo_version, verbose, debug)
3525     if verbose: time_print('Elapsed time (sec): %s' % (time.time() - start))
3526
-> 3527     ont = cls.from_table(output, clixo_format=True)
3528     ont.rename(terms=lambda x: 'S:%s' % x, inplace=True)
3529     ont.edge_attr.rename(columns={'3': 'CLIXO_score'}, inplace=True)

~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/ddot/Ontology.py in from_table(cls, table, parent, child, is_mapping, mapping, mappi
ng_parent, mapping_child, header, propagate, verbose, clixo_format, clear_default_attr, **kwargs)
1588         header=None,
1589         clixo_format=False,
-> 1590         verbose=verbose)
1591         ont.edge_attr.columns = map(str, ont.edge_attr.columns)

```

```
1592         del ont.edge_attr['2']
```

```
~/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/ddot/Ontology.py in from_table(cls, table, parent, child, is_mapping, mapping, mappi
ng_parent, mapping_child, header, propagate, verbose, clixo_format, clear_default_attr, **kwargs)
    1606         table = pd.read_table(table, comment='#', header=header)
    1607     except:
-> 1608         assert isinstance(table, pd.DataFrame)
    1609
    1610         if child not in table.columns:
```

AssertionError:

```
import session_info
session_info.show()
```

```
/Users/helenmasson/opt/anaconda3/envs/secCellFIE/lib/python3.6/site-packages/jupyter_server/transutils.py:13: FutureWarning: The alias `_( )` wil
l be deprecated. Use `_i18n()` instead.
  warnings.warn(warn_msg, FutureWarning)
```

▼ Click to view session information

ddot NA ndex2 3.3.1 networkx 1.11 numpy 1.19.5 openpyxl 3.0.7 pandas 1.1.5

## session\_info 1.0.0

▼ Click to view modules imported as dependencies

anyio	NA
appnope	0.1.2
argon2	20.1.0
attr	20.3.0
babel	2.9.0
backcall	0.2.0
cairo	1.20.0
certifi	2020.12.05
chardet	4.0.0
cythonruntime	NA
dateutil	2.8.1
decorator	4.4.2
defusedxml	0.7.1
etxmlfile	1.0.1
idna	2.10
igraph	0.8.3
ijson	3.1.4
immutables	0.15
importlibmetadata	NA
ipykernel	5.5.0
ipythongenutils	0.2.0
jedi	0.18.0
jinjja2	2.11.3
json5	NA
jsonschema	3.2.0
jupyter-server	1.5.0
jupyterlab-server	2.3.0
markupsafe	1.1.1
nbclassic	NA
nbformat	5.1.2
ndex	NA
ndex2cx	NA
packaging	20.9
parso	0.8.1
pexpect	4.8.0
pickleshare	0.7.5
pkg-resources	NA
prometheus-client	NA
prompt-toolkit	3.0.18
ptyprocess	0.7.0
pvectorc	NA
pygments	2.8.1
pyrsistent	NA
pytz	2021.1
requests	2.25.1
requeststoolbelt	0.9.1
scipy	1.5.3
send2trash	NA
six	1.15.0
sniffio	1.2.0
storemagic	NA
terminado	0.9.3
texttable	1.6.3
tornado	6.1
traitlets	4.3.3
typing_extensions	NA
urllib3	1.26.4
version	1.11
wcwidth	0.2.5
xlrd	2.0.1
zipp	NA
zmq	22.0.3

IPython 7.16.1 jupyter-client 6.1.12 jupyter-core 4.7.1 jupyterlab 3.0.12

## notebook 6.3.0

Python 3.6.13 | packaged by conda-forge | (default, Feb 19 2021, 05:36:16) [GCC Clang 11.0.1]

## Darwin-19.6.0-x86\_64-i386-64bit

---

Session information updated at 2021-06-03 08:12