

# Report - Profiling Internet Users

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### Output Files Explanation

There are two types of output files of Profiling Internet User Program which are stored in the output folder of the project.

**P Values Files:** - There are 3 P-values files in the output folder, and these are PValue\_10.csv, PValue\_227.csv and PValue\_300.csv for 10 Seconds, 227 seconds and 300 seconds windows, respectively. This file contains all the comparison **P-Value** of One User to all the other Users.

Files	wgocnc.xlsx	sbpc42.xlsx	rrg3md.xlsx	jrrgxf.xlsx	jmd5h8.xlsx	pecxc9.xlsx
wgocnc.xlsx	0.500000001	0.999999889	0.999997379	0.999932	0.999999535	0.999955224
sbpc42.xlsx	0.625166933	0.500000001	0.63729904	0.2608589	0.72685008	0.492292117
rrg3md.xlsx	0.999999339	0.999082508	0.500000001	1	1	0.999999986
jrrgxf.xlsx	0.001603436	0.208471424	0.340984079	0.5	0.540329694	3.51E-07
jmd5h8.xlsx	0.709469754	0.830359337	0.934427945	0.0751359	0.500000001	0.716282714
pecxc9.xlsx	0.999985314	1	0.999999998	0.9866511	0.999999993	0.500000001
smdvw5.xlsx	1	0.999999954	1	1	0.999999842	0.999998817

A row in the above table means a user's comparison with all the other users e.g. "wgocnc.xlsx" is compared with users "wgocnc.xlsx", "sbpc42.xlsx", "rrg3md.xlsx" and so on.

**Differentiability files:** - In this type, there are three files in the output folder, and these are "Distinguishable\_10.csv", "Distinguishable\_227.csv" and "Distinguishable\_300.csv" for 10 Seconds, 227 seconds and 300 seconds windows, respectively. This file contains all the comparison **Differentiability** of One User to all the other User.

Files	wgocnc.xlsx	sbpc42.xlsx	rrg3md.xlsx	jrrgxf.xlsx	jmd5h8.xlsx	pecxc9.xlsx
wgocnc.xlsx	No	No	No	No	No	No
sbpc42.xlsx	No	No	No	No	No	No
rrg3md.xlsx	No	No	No	No	No	No
jrrgxf.xlsx	Yes	No	No	No	No	Yes
jmd5h8.xlsx	No	No	No	No	No	No
pecxc9.xlsx	No	No	No	No	No	No
smdvw5.xlsx	No	No	No	No	No	No

A row in the above table means a user's comparison with all the other users e.g. "wgocnc.xlsx" is compared with users "wgocnc.xlsx", "sbpc42.xlsx", "rrg3md.xlsx" and so on.

There are some files that do not have any data. Data entry for those files in the above output files either has "None" value or empty cell.

## P Value Tables

### 10 Seconds Windows:

[illegible]

sgb2c.xlsx	0.455004641	0.887000001	0.605497982	0.5254445	0.61872452	0.50034681	0.51397052	0.39018232	0.48188363	0.478274245	0.579533045	0.988152043	0.956160792	0.88683816	None	0.598755305	0.395748078	0.61090332	None	0.60421108	0.62424856	0.483743992	0.42369278	0.29852489	0.61382158	0.55332713	0.578033765	0.34300348	0.74059129	None	0.615126918	0.73363938	0.49487654	0.20176594	0.17023562	0.43935331	0.320842782	None	0.567504502	0.48893823	0.564135387	0.31322552	0.31815248	0.49711309	0.59496532	0.31744205	0.46167249	0.4552096	0.3393337	0.173065278	0.658916529	0.658916529	0.46995464	0.42890315	None	0.961473875	0.415414009	0.93940942	0.500000001	0.999991223	0.998324641	0.9996307	0.996680555	0.999839171	0.99680915	0.999820094	0.999215199	0.99970308	0.98270832	0.999558098	0.99954244	0.99985177	None	0.999960056	0.999968877	0.999976643	None	0.99992215	0.999852474	0.989639164	0.999750354	0.998672132	0.999751193	0.999818503	0.999801136	0.990248725	0.99991684	None	0.999752939	0.999902182	0.99999846	0.999961241	0.99999843	0.99919986	0.999576475	None	0.973684488	0.987474387	0.999882037	0.99993296	0.99879263	0.99999992	0.99999652	0.999731954	0.999851819	0.9982468	0.99842522	0.999999999	0.999286094	0.988017285	0.999520343	0.99982707	0.999500001	0.999991223	0.998324641	0.9996307	0.996680555	0.999839171	0.99680915	0.999820094	0.999215199	0.99970308	0.98270832	0.999558098	0.99954244	0.99985177	None	0.999960056	0.999968877	0.999976643	None	0.99992215	0.999852474	0.989639164	0.999750354	0.998672132	0.999751193	0.999818503	0.999801136	0.990248725	0.99991684	None	0.999752939	0.999902182	0.99999846	0.999961241	0.99999843	0.99919986	0.999576475	None	0.973684488	0.987474387	0.999882037	0.99993296	0.99879263	0.99999992	0.99999652	0.999731954	0.999851819	0.9982468	0.99842522	0.999999999	0.999286094	0.988017285	0.999520343	0.99982707	0.999500001	0.999991223	0.998324641	0.9996307	0.996680555	0.999839171	0.99680915	0.999820094	0.999215199	0.99970308	0.98270832	0.999558098	0.99954244	0.99985177	None	0.999960056	0.999968877	0.999976643	None	0.99992215	0.999852474	0.989639164	0.999750354	0.998672132	0.999751193	0.999818503	0.999801136	0.990248725	0.99991684	None	0.999752939	0.999902182	0.99999846	0.999961241	0.99999843	0.99919986	0.999576475	None	0.973684488	0.987474387	0.999882037	0.99993296	0.99879263	0.99999992	0.99999652	0.999731954	0.999851819	0.9982468	0.99842522	0.999999999	0.999286094	0.988017285	0.999520343	0.99982707	0.999500001	0.999991223	0.998324641	0.9996307	0.996680555	0.999839171	0.99680915	0.999820094	0.999215199	0.99970308	0.98270832	0.999558098	0.99954244	0.99985177	None	0.999960056	0.999968877	0.999976643	None	0.99992215	0.999852474	0.989639164	0.999750354	0.998672132	0.999751193	0.999818503	0.999801136	0.990248725	0.99991684	None	0.999752939	0.999902182	0.99999846	0.999961241	0.99999843	0.99919986	0.999576475	None	0.973684488	0.987474387	0.999882037	0.99993296	0.99879263	0.99999992	0.99999652	0.999731954	0.999851819	0.9982468	0.99842522	0.999999999	0.999286094	0.988017285	0.999520343	0.99982707	0.999500001	0.9999
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## Distinguishability Tables

### 10 Seconds Window:

	wgocnc.xlsx	sbcpc42.xlsx	rg3md.xlsx	jirgrf.xlsx	jmd5h8.xlsx	pecxc9.xlsx	smdwv5.xlsx	mng9n6.xlsx	mt7w2.xlsx	kedgm9.xlsx	dlok6.xlsx	hnlidm2.xlsx	dsxd8.xlsx	wahbf.xlsx	ngtp8b.xlsx	kah89f.xlsx	hmmh4.xlsx	ajdqnf.xlsx	jahq76.xlsx	elrfhc.xlsx	nm8c7.xlsx	ajb9b3.xlsx	tah5z2.xlsx	zws2p8.xlsx	tjdpzd.xlsx	tcdbz7.xlsx	lgnb79.xlsx	vvmvmd.xlsx	njd5zf.xlsx	cjdk88.xlsx	mjpg95.xlsx	dtqb7d.xlsx	mwwcn6.xlsx	kdcncc.xlsx	jdf5g4.xlsx	jghn9c.xlsx	kab5zb.xlsx	habc8.xlsx	jac345.xlsx	nhm2p3.xlsx	lms8m4.xlsx	jfk535.xlsx	sanfz9.xlsx	jkn7fc.xlsx	jlgwcc.xlsx	oro26b.xlsx	bayeg7.xlsx	tigdg9.xlsx	pt7td.xlsx	amsh7c.xlsx	ctkbn4.xlsx	hemmb2.xlsx	jlm94.xlsx	krhf5f.xlsx			
wgocnc.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	None	No	No	No	No	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
sbcpc42.xlsx	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
rg3md.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
jirgrf.xlsx	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
jmd5h8.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	Yes	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	
pecxc9.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No
smdwv5.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
mng9n6.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
mt7w2.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
kedgm9.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
dlok6.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
hnlidm2.xlsx	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
dsxd8.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
wahbf.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
ngtp8b.xlsx	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None				
kah89f.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
hmmh4.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
ajdqnf.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
jahq76.xlsx	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None				
elrfhc.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
nm8c7.xlsx	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	None	Yes	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
ajb9b3.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
tah5z2.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
zws2p8.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
tjdpzd.xlsx	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	None	Yes	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
tcdbz7.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
lgnb79.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
vvmvmd.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
njd5zf.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	Yes	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	Yes	Yes	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	
cjdk88.xlsx	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None				
mjpg95.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
dtqb7d.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
mwwcn6.xlsx	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
kdcncc.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	Yes	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
jdf5g4.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
jghn9c.xlsx	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
kab5zb.xlsx	Yes	No	No	Yes	No	No	No	No	No	No	Yes	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	Yes	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	
habc8.xlsx																																																									
jac345.xlsx	No	No	No	No	No	No	No	No	No	No	No	No	No	No	None	No	No	No	None	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
nhm2p3.xlsx	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	None	No																																									

### 227 Seconds Window:

[illegible]



## Anomaly

1. There are some users who does not have any data for the given time frame
2. There are some users who does not have any data for second week. As we know we must calculate  $r_{1a2a}$ ,  $r_{1a2b}$  and  $r_{2a2b}$  (for Z-Value and P-Value) and for calculating these values we need the data for second week.

Note: - For first anomaly, data in output is empty and for second anomaly data in output has "None" value.

## Analysis

For 10 seconds window, total no comparison which has  $P\text{-Value} \leq 0.05$  or Distinguishability equals to "Yes" is 67 and which mean there are 67 user comparison pair which can be easily distinguishable from each other while for 227 windows total pair is 10 and for 300 seconds window the total pair is 6.

As per my understanding, we can say that as the window size increase the degree of Indistinguishability increases and there is a big deference between 10 seconds window data and 227 seconds window data as compared to 227 data and 300 data. Also, there are some users which do not have enough data for proper comparison. So, more data needed for those users for proper correlation.