**My Interpretation**

**RQ1)**

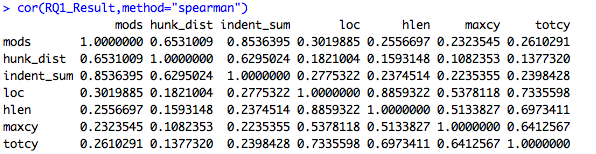
--uses the table cmetrics\_dif, which is the difference between the traditional complexity measures at each revision, also dumps the change complexity measures for comparison purposes

\o '~/mining\_procedure/complexity/r/in/difference.in'

select files, mods, hunks, hunk\_dist, indent\_sum, indent\_std\_dev, loc, funcs, blks, coml, hlen, hlevel, hmd, maxcy, mincy, avgcy, medcy, totcy from change\_complexity c, cmetrics\_dif s, git\_commit g where c.commit = s.commit and s.commit = g.commit order by committer\_dt asc;

\o

**CCMv(i) ~ TCMv(i+1) – TCMv(i)**



- Poor correlation between CCM (mods, hunk\_dist, indent\_sum) and TCM

(loc, hlen, maxcy, totcy).

**RQ2)**

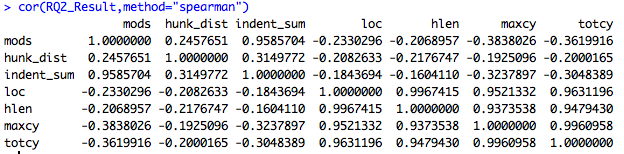
--sum of change complexity measures, and compare with traditional complexity measures at each commit, but only consider the last 1000 commits when summing CCM

\o '~/mining\_procedure/complexity/r/in/change\_decay\_1000.in'

select files, mods, hunks, hunk\_dist, indent\_sum, indent\_std\_dev, loc, funcs, blks, coml, hlen, hlevel, hmd, maxcy, mincy, avgcy, medcy, totcy from change\_decay\_1000 c, cmetrics\_sum s, git\_commit g where c.commit = s.commit and s.commit = g.commit order by committer\_dt asc;

\o

**TCMv(i+1) ~ ∑0-i CCMv(i) n=1000**



* Negative correlations between TCM and CCM.
* LOC is strongly correlated with the other TCM (hlen, maxcy, totcy).

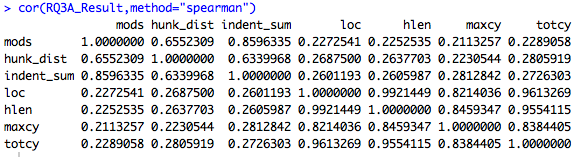
**RQ3A)**

\o '~/mining\_procedure/complexity/r/in/sc\_dk.in'

select files, mods, hunks, hunk\_dist, indent\_sum, indent\_std\_dev, loc, funcs, blks, coml, hlen, hlevel, hmd, maxcy, mincy, avgcy, medcy, totcy from change\_decay\_1000 c, cmetrics\_change s, git\_commit g where c.commit = s.commit and s.commit = g.commit order by committer\_dt asc;

\o

**The traditional measures calculated on only the files that had changed, compared to CCM at last 1000 changed.**



- Poor correlation between CCM (mods, hunk\_dist, indent\_sum) and TCM

(loc, hlen, maxcy, totcy).

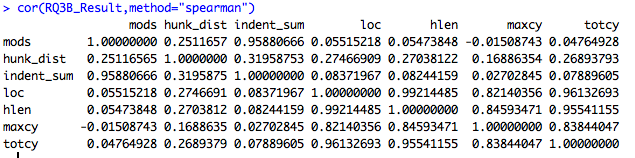
**RQ3B)**

\o '~/mining\_procedure/complexity/r/in/sc\_cc.in'

select files, mods, hunks, hunk\_dist, indent\_sum, indent\_std\_dev, loc, funcs, blks, coml, hlen, hlevel, hmd, maxcy, mincy, avgcy, medcy, totcy from change\_complexity c, cmetrics\_change s, git\_commit g where c.commit = s.commit and s.commit = g.commit order by committer\_dt asc;

\o

**The traditional measures calculated on only the files that had changed, compared to CCM**

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- Maxcy has a negative correlation with mods.

**Time Series:**

**8792 rows in total of each query.**

**TS1) Selects all columns from TCM and CCM, orders by date.**

select committer\_dt, files, mods, hunks, hunk\_dist, indent\_sum, indent\_std\_dev, loc, funcs, blks, coml, hlen, hlevel, hmd, maxcy, mincy, avgcy, medcy, totcy from change\_complexity c, cmetrics\_sum s ,git\_commit g where c.commit = s.commit and s.commit=g.commit order by committer\_dt asc;

**TS2) Selects loc, orders by date.**

select committer\_dt, loc from change\_complexity c, cmetrics\_sum s ,git\_commit g where c.commit = s.commit and s.commit=g.commit order by committer\_dt asc;

**TS3) Selects totcy, orders by date.**

select committer\_dt, totcy from change\_complexity c, cmetrics\_sum s ,git\_commit g where c.commit = s.commit and s.commit=g.commit order by committer\_dt asc;

**TS4) Selects hlen, orders by date.**

select committer\_dt, hlen from change\_complexity c, cmetrics\_sum s ,git\_commit g where c.commit = s.commit and s.commit=g.commit order by committer\_dt asc;

**TS5) Selects mods, orders by date.**

select committer\_dt, mods from change\_complexity c, cmetrics\_sum s ,git\_commit g where c.commit = s.commit and s.commit=g.commit order by committer\_dt asc;

**TS6) Selects hunk\_dist, orders by date.**

select committer\_dt, hunk\_dist from change\_complexity c, cmetrics\_sum s ,git\_commit g where c.commit = s.commit and s.commit=g.commit order by committer\_dt asc;

**TS7) Selects indent\_sum, orders by date.**

select committer\_dt, indent\_sum from change\_complexity c, cmetrics\_sum s ,git\_commit g where c.commit = s.commit and s.commit=g.commit order by committer\_dt asc;