

Socio-technical analysis result (Cayenne)

| | range.date | devs | ml.only.devs | code.only.devs | ml.code.devs | perc.ml.only.devs | perc.code.only.devs | perc.ml.code.devs | sponsored.devs | ratio.sponsored | sponsored.core.devs | ratio.sponsored.core | num.tz | core.global.devs | core.mail.devs | core.code.devs | org.silo | prima.donnas | radio.silence | black.cloud | missing.links | st.congruence | communicability | global.turnover | code.turnover |
|----|-------------------|------|--------------|----------------|--------------|-------------------|---------------------|-------------------|----------------|-----------------|---------------------|----------------------|--------|------------------|----------------|----------------|----------|--------------|---------------|-------------|---------------|---------------|-----------------|-----------------|---------------|
| 1 | 2013-05 – 2013-08 | 12 | 8 | 1 | 3 | 0.6667 | 0.0833 | 0.2500 | 0 | 0.0000 | 0 | 0.0000 | 1 | 6 | 6 | 1 | 1 | 0 | 4 | 0 | 1 | 0.0000 | 0.5000 | 0.0000 | 0.0000 |
| 2 | 2013-08 – 2013-11 | 9 | 5 | 2 | 2 | 0.5556 | 0.2222 | 0.2222 | 0 | 0.0000 | 0 | 0.0000 | 1 | 4 | 3 | 2 | 2 | 0 | 7 | 0 | 2 | 0.0000 | 0.2500 | 0.5714 | 0.5000 |
| 3 | 2013-11 – 2014-03 | 9 | 5 | 2 | 2 | 0.5556 | 0.2222 | 0.2222 | 0 | 0.0000 | 0 | 0.0000 | 1 | 5 | 4 | 2 | 2 | 0 | 0 | 0 | 2 | 0.0000 | 0.2500 | 0.2222 | 0.2500 |
| 4 | 2014-03 – 2014-05 | 10 | 6 | 2 | 2 | 0.6000 | 0.2000 | 0.2000 | 0 | 0.0000 | 0 | 0.0000 | 1 | 4 | 4 | 1 | 1 | 0 | 4 | 0 | 1 | 0.0000 | 0.5000 | 0.3158 | 0.2500 |
| 5 | 2014-05 – 2014-08 | 10 | 5 | 3 | 2 | 0.5000 | 0.3000 | 0.2000 | 2 | 0.2000 | 0 | 0.0000 | 1 | 5 | 4 | 2 | 2 | 0 | 7 | 0 | 2 | 0.0000 | 0.4000 | 0.4000 | 0.4444 |
| 6 | 2014-08 – 2014-11 | 13 | 7 | 4 | 2 | 0.5385 | 0.3077 | 0.1538 | 1 | 0.0769 | 1 | 0.1667 | 1 | 6 | 5 | 2 | 3 | 0 | 9 | 0 | 3 | 0.0000 | 0.4444 | 0.1739 | 0.1818 |
| 7 | 2014-11 – 2015-02 | 11 | 7 | 2 | 2 | 0.6364 | 0.1818 | 0.1818 | 0 | 0.0000 | 0 | 0.0000 | 1 | 6 | 5 | 2 | 2 | 0 | 0 | 0 | 3 | 0.0000 | 0.2500 | 0.5000 | 0.6000 |
| 8 | 2015-02 – 2015-05 | 13 | 8 | 2 | 3 | 0.6154 | 0.1538 | 0.2308 | 2 | 0.1538 | 1 | 0.2000 | 1 | 6 | 6 | 2 | 1 | 0 | 4 | 0 | 1 | 0.5000 | 0.7000 | 0.3333 | 0.2222 |
| 9 | 2015-05 – 2015-08 | 10 | 5 | 3 | 2 | 0.5000 | 0.3000 | 0.2000 | 3 | 0.3000 | 0 | 0.0000 | 1 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1.0000 | 1.0000 | 0.4348 | 0.4000 |
| 10 | 2015-08 – 2015-11 | 11 | 5 | 3 | 3 | 0.4545 | 0.2727 | 0.2727 | 2 | 0.1818 | 1 | 0.1667 | 1 | 6 | 5 | 2 | 2 | 0 | 0 | 0 | 2 | 0.0000 | 0.6667 | 0.2857 | 0.3636 |
| 11 | 2015-11 – 2016-02 | 17 | 9 | 5 | 3 | 0.5294 | 0.2941 | 0.1765 | 3 | 0.1765 | 1 | 0.1250 | 1 | 8 | 7 | 3 | 5 | 0 | 2 | 0 | 5 | 0.1667 | 0.5833 | 0.0714 | 0.5714 |
| 12 | 2016-02 – 2016-05 | 14 | 6 | 4 | 4 | 0.4286 | 0.2857 | 0.2857 | 0 | 0.0000 | 0 | 0.0000 | 1 | 7 | 6 | 3 | 6 | 0 | 3 | 0 | 6 | 0.0000 | 0.4583 | 0.5806 | 0.5000 |

| | core.global.turnover | core.mail.turnover | core.code.turnover | ratio.smelly.quitters | ratio.smelly.devs | global.truck | mail.truck | code.truck | closeness.centr | betweenness.centr | degree.centr | global.mod | mail.mod | code.mod | density | mail.only.core.devs | code.only.core.devs | ml.code.core.devs | ratio.mail.only.core | ratio.code.only.core | ratio.ml.code.core |
|----|----------------------|--------------------|--------------------|-----------------------|-------------------|--------------|------------|------------|-----------------|-------------------|--------------|------------|----------|----------|---------|---------------------|---------------------|-------------------|----------------------|----------------------|--------------------|
| 1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.5000 | 0.5000 | 0.4545 | 0.7500 | 0.6290 | 0.3983 | 0.4697 | 0.3615 | 0.0065 | -0.5000 | 0.3485 | 6 | 1 | 0 | 0.8571 | 0.1429 | 0.0000 |
| 2 | 0.4000 | 0.6667 | 0.0000 | 0.5000 | 1.0000 | 0.5556 | 0.5714 | 0.5000 | 0.5526 | 0.6049 | 0.4722 | 0.3725 | -0.2608 | -0.3818 | 0.2778 | 2 | 1 | 1 | 0.5000 | 0.2500 | 0.2500 |
| 3 | 0.0000 | 0.2857 | 0.0000 | 1.0000 | 0.3333 | 0.4444 | 0.4286 | 0.5000 | 0.3229 | 0.3214 | 0.2083 | 0.3396 | 0.0785 | -0.3770 | 0.4167 | 3 | 1 | 1 | 0.6000 | 0.2000 | 0.2000 |
| 4 | 0.2222 | 0.2500 | 0.6667 | 0.3333 | 0.6000 | 0.6000 | 0.5000 | 0.7500 | 0.2144 | 0.1852 | 0.3333 | 0.3480 | 0.0328 | -0.5000 | 0.3333 | 4 | 1 | 0 | 0.8000 | 0.2000 | 0.0000 |
| 5 | 0.4444 | 0.5000 | 0.0000 | 0.2500 | 0.9000 | 0.5000 | 0.4286 | 0.6000 | 0.2569 | 0.4763 | 0.3778 | 0.1236 | -0.2311 | -0.4976 | 0.2889 | 4 | 2 | 0 | 0.6667 | 0.3333 | 0.0000 |
| 6 | 0.3636 | 0.2222 | 0.5000 | 1.0000 | 0.9231 | 0.5385 | 0.4444 | 0.6667 | 0.2316 | 0.4773 | 0.3846 | 0.2810 | -0.1949 | -0.4594 | 0.2821 | 5 | 2 | 0 | 0.7143 | 0.2857 | 0.0000 |
| 7 | 0.5000 | 0.4000 | 0.0000 | 0.8333 | 0.2727 | 0.4545 | 0.4444 | 0.5000 | 0.2476 | 0.4278 | 0.3455 | 0.0080 | 0.2603 | -0.4734 | 0.2545 | 4 | 1 | 1 | 0.6667 | 0.1667 | 0.1667 |
| 8 | 0.3333 | 0.1818 | 0.0000 | 0.0000 | 0.4615 | 0.5385 | 0.4545 | 0.6000 | 0.1980 | 0.2413 | 0.3526 | 0.1497 | 0.0487 | -0.4895 | 0.3974 | 5 | 1 | 1 | 0.7143 | 0.1429 | 0.1429 |
| 9 | 0.4000 | 0.4000 | 2.0000 | 0.6000 | 0.0000 | 0.6000 | 0.4286 | 1.0000 | 0.1334 | 0.1728 | 0.4000 | 0.0329 | 0.0329 | 0.0000 | 0.2667 | 4 | 0 | 0 | 1.0000 | 0.0000 | 0.0000 |
| 10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.2727 | 0.4545 | 0.3750 | 0.6667 | 0.1643 | 0.2172 | 0.4182 | 0.1036 | 0.0368 | -0.3833 | 0.3818 | 5 | 2 | 0 | 0.7143 | 0.2857 | 0.0000 |
| 11 | 0.0000 | 0.1667 | 0.0000 | 0.0000 | 0.4118 | 0.5294 | 0.4167 | 0.6250 | 0.1268 | 0.1595 | 0.3235 | 0.1417 | 0.1225 | 0.0549 | 0.3015 | 6 | 2 | 1 | 0.6667 | 0.2222 | 0.1111 |
| 12 | 0.1333 | 0.3077 | 1.0000 | 0.4444 | 0.6429 | 0.5000 | 0.4000 | 0.6250 | 0.1891 | 0.1906 | 0.3077 | 0.4014 | 0.0336 | 0.3735 | 0.3077 | 5 | 2 | 1 | 0.6250 | 0.2500 | 0.1250 |

Community smells: Pearson's correlation (Cayenne)

| | devs | ml.only.devs | code.only.devs | ml.code.devs | perc.ml.only.devs | perc.code.only.devs | perc.ml.code.devs | sponsored.devs | ratio.sponsored | sponsored.core.devs | ratio.sponsored.core | num.tz | core.global.devs | core.mail.devs | core.code.devs | org.silo | prima.donnas | radio.silence | black.cloud | missing.links | st.congruence | communicability | global.turnover | code.turnover |
|---------------|-------|----------------------|--------------------|--------------------|-----------------------|---------------------|-------------------|----------------|-----------------|---------------------|----------------------|--------|------------------|----------------|----------------|----------|--------------|---------------------|---------------------|-------------------|----------------------|----------------------|--------------------|---------------|
| org.silo | 0.68 | 0.26 | 0.73 | 0.59 | -0.50 | 0.44 | 0.13 | -0.05 | -0.21 | 0.22 | 0.11 | - | 0.74 | 0.51 | 0.86 | - | - | 0.09 | - | 0.99 | -0.42 | -0.28 | -0.08 | 0.42 |
| prima.donnas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| radio.silence | 0.03 | 0.07 | 0.08 | -0.17 | 0.07 | 0.09 | -0.28 | -0.15 | -0.16 | 0.10 | 0.13 | - | -0.13 | -0.17 | 0.13 | 0.09 | - | - | - | 0.03 | -0.31 | -0.28 | 0.02 | -0.26 |
| black.cloud | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| missing.links | 0.67 | 0.28 | 0.70 | 0.55 | -0.44 | 0.40 | 0.08 | -0.10 | -0.25 | 0.18 | 0.08 | - | 0.75 | 0.51 | 0.86 | 0.99 | - | 0.03 | - | - | -0.44 | -0.34 | -0.03 | 0.50 |
| | | core.global.turnover | core.mail.turnover | core.code.turnover | ratio.smelly.quitters | ratio.smelly.devs | global.truck | mail.truck | code.truck | closeness.centr | betweenness.centr | | degree.centr | global.mod | mail.mod | code.mod | density | mail.only.core.devs | code.only.core.devs | ml.code.core.devs | ratio.mail.only.core | ratio.code.only.core | ratio.ml.code.core | |
| org.silo | -0.44 | -0.16 | -0.15 | -0.08 | 0.28 | -0.27 | -0.33 | -0.38 | -0.25 | -0.15 | -0.34 | 0.27 | 0.06 | 0.67 | -0.16 | 0.31 | 0.73 | 0.46 | -0.53 | 0.51 | 0.25 | | | |
| prima.donnas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| radio.silence | 0.42 | 0.36 | -0.17 | 0.06 | 0.92 | 0.35 | 0.49 | -0.15 | 0.34 | 0.61 | 0.39 | 0.42 | -0.84 | -0.30 | -0.28 | -0.07 | 0.34 | -0.22 | -0.26 | 0.51 | -0.13 | | | |
| black.cloud | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| missing.links | -0.37 | -0.13 | -0.18 | -0.03 | 0.23 | -0.33 | -0.33 | -0.43 | -0.26 | -0.11 | -0.35 | 0.19 | 0.15 | 0.63 | -0.22 | 0.29 | 0.70 | 0.51 | -0.54 | 0.48 | 0.30 | | | |

Community smells: Pearson's correlation - p-values (Cayenne)

| | devs | ml.only.devs | code.only.devs | ml.code.devs | perc.ml.only.devs | perc.code.only.devs | perc.ml.code.devs | sponsored.devs | ratio.sponsored | sponsored.core.devs | ratio.sponsored.core | num.tz | core.global.devs | core.mail.devs | core.code.devs | org.silo | prima.donnas | radio.silence | black.cloud | missing.links | st.congruence | communicability | global.turnover | code.turnover |
|---------------|----------------------|--------------------|--------------------|-----------------------|-------------------|---------------------|-------------------|----------------|-----------------|---------------------|----------------------|------------|------------------|----------------|----------------|---------------------|---------------------|-------------------|----------------------|----------------------|--------------------|-----------------|-----------------|---------------|
| org.silo | 0.01 | 0.42 | 0.01 | 0.04 | 0.09 | 0.15 | 0.69 | 0.87 | 0.51 | 0.50 | 0.72 | - | 0.01 | 0.09 | 0.00 | - | - | 0.79 | - | 0.00 | 0.18 | 0.37 | 0.82 | 0.20 |
| prima.donnas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| radio.silence | 0.92 | 0.82 | 0.81 | 0.59 | 0.83 | 0.79 | 0.37 | 0.64 | 0.63 | 0.76 | 0.70 | - | 0.70 | 0.60 | 0.69 | 0.79 | - | - | - | 0.93 | 0.34 | 0.37 | 0.95 | 0.44 |
| black.cloud | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| missing.links | 0.02 | 0.37 | 0.01 | 0.07 | 0.16 | 0.20 | 0.80 | 0.76 | 0.43 | 0.58 | 0.81 | - | 0.00 | 0.09 | 0.00 | 0.00 | - | 0.93 | - | - | 0.16 | 0.27 | 0.94 | 0.12 |
| | core.global.turnover | core.mail.turnover | core.code.turnover | ratio.smelly.quitters | ratio.smelly.devs | global.truck | mail.truck | code.truck | closeness.cent | betweenness.cent | degree.cent | global.mod | mail.mod | code.mod | density | mail.only.core.devs | code.only.core.devs | ml.code.core.devs | ratio.mail.only.core | ratio.code.only.core | ratio.ml.code.core | | | |
| org.silo | 0.17 | 0.64 | 0.66 | 0.81 | 0.38 | 0.40 | 0.30 | 0.22 | 0.43 | 0.64 | 0.28 | 0.40 | 0.86 | 0.02 | 0.63 | 0.33 | 0.01 | 0.13 | 0.08 | 0.09 | 0.43 | | | |
| prima.donnas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| radio.silence | 0.19 | 0.28 | 0.63 | 0.87 | 0.00 | 0.26 | 0.10 | 0.64 | 0.28 | 0.03 | 0.22 | 0.18 | 0.00 | 0.35 | 0.39 | 0.84 | 0.27 | 0.48 | 0.42 | 0.09 | 0.70 | | | |
| black.cloud | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| missing.links | 0.27 | 0.70 | 0.59 | 0.94 | 0.47 | 0.29 | 0.30 | 0.16 | 0.42 | 0.73 | 0.26 | 0.56 | 0.65 | 0.03 | 0.49 | 0.37 | 0.01 | 0.09 | 0.07 | 0.11 | 0.35 | | | |

Community smells: Spearman's correlation (Cayenne)

| | devs | ml.only.devs | code.only.devs | ml.code.devs | perc.ml.only.devs | perc.code.only.devs | perc.ml.code.devs | sponsored.devs | ratio.sponsored | sponsored.core.devs | ratio.sponsored.core | num.tz | core.global.devs | core.mail.devs | core.code.devs | org.silo | prima.donnas | radio.silence | black.cloud | missing.links | st.congruence | communicability | global.turnover | code.turnover |
|---------------|------|--------------|----------------|--------------|-------------------|---------------------|-------------------|----------------|-----------------|---------------------|----------------------|--------|------------------|----------------|----------------|----------|--------------|---------------|-------------|---------------|---------------|-----------------|-----------------|---------------|
| org.silo | 0.45 | 0.13 | 0.67 | 0.27 | -0.46 | 0.44 | -0.12 | -0.07 | -0.14 | 0.27 | 0.16 | - | 0.63 | 0.32 | 0.90 | - | - | 0.11 | - | 0.97 | -0.35 | -0.41 | -0.13 | 0.35 |
| prima.donnas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| radio.silence | 0.07 | 0.16 | 0.00 | -0.15 | 0.14 | 0.14 | -0.17 | -0.13 | -0.09 | 0.08 | 0.12 | - | -0.12 | -0.11 | 0.01 | 0.11 | - | - | - | 0.01 | -0.25 | -0.22 | 0.01 | -0.30 |
| black.cloud | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| missing.links | 0.47 | 0.21 | 0.60 | 0.25 | -0.35 | 0.34 | -0.18 | -0.13 | -0.21 | 0.21 | 0.10 | - | 0.67 | 0.37 | 0.88 | 0.97 | - | 0.01 | - | - | -0.35 | -0.45 | -0.04 | 0.48 |

| | core.global.turnover | core.mail.turnover | core.code.turnover | ratio.smelly.quitters | ratio.smelly.devs | global.truck | mail.truck | code.truck | closeness.centr | betweenness.centr | degree.centr | global.mod | mail.mod | code.mod | density | mail.only.core.devs | code.only.core.devs | ml.code.core.devs | ratio.mail.only.core | ratio.code.only.core | ratio.ml.code.core |
|---------------|----------------------|--------------------|--------------------|-----------------------|-------------------|--------------|------------|------------|-----------------|-------------------|--------------|------------|----------|----------|---------|---------------------|---------------------|-------------------|----------------------|----------------------|--------------------|
| org.silo | -0.31 | -0.15 | -0.12 | 0.05 | 0.34 | -0.38 | -0.49 | -0.38 | -0.15 | 0.12 | -0.39 | 0.20 | 0.14 | 0.53 | -0.10 | 0.21 | 0.80 | 0.40 | -0.67 | 0.68 | 0.25 |
| prima.donnas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| radio.silence | 0.30 | 0.18 | 0.03 | -0.04 | 0.92 | 0.45 | 0.54 | 0.00 | 0.41 | 0.56 | 0.33 | 0.48 | -0.78 | -0.42 | -0.12 | 0.04 | 0.27 | -0.22 | -0.04 | 0.41 | -0.16 |
| black.cloud | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| missing.links | -0.18 | -0.10 | -0.14 | 0.10 | 0.24 | -0.43 | -0.46 | -0.43 | -0.14 | 0.11 | -0.43 | 0.10 | 0.27 | 0.50 | -0.20 | 0.20 | 0.73 | 0.47 | -0.65 | 0.58 | 0.31 |

Community smells: Spearman's correlation - p-values (Cayenne)

| | devs | ml.only.devs | code.only.devs | ml.code.devs | perc.ml.only.devs | perc.code.only.devs | perc.ml.code.devs | sponsored.devs | ratio.sponsored | sponsored.core.devs | ratio.sponsored.core | num.tz | core.global.devs | core.mail.devs | core.code.devs | org.silo | prima.donnas | radio.silence | black.cloud | missing.links | st.congruence | communicability | global.turnover | code.turnover |
|---------------|----------------------|--------------------|--------------------|-----------------------|-------------------|---------------------|-------------------|----------------|-----------------|---------------------|----------------------|------------|------------------|----------------|----------------|---------------------|---------------------|-------------------|----------------------|----------------------|--------------------|-----------------|-----------------|---------------|
| org.silo | 0.14 | 0.69 | 0.02 | 0.39 | 0.13 | 0.15 | 0.72 | 0.82 | 0.65 | 0.40 | 0.63 | - | 0.03 | 0.30 | 0.00 | - | - | 0.75 | - | 0.00 | 0.26 | 0.18 | 0.71 | 0.29 |
| prima.donnas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| radio.silence | 0.84 | 0.63 | 1.00 | 0.65 | 0.66 | 0.67 | 0.60 | 0.69 | 0.77 | 0.81 | 0.72 | - | 0.70 | 0.73 | 0.97 | 0.75 | - | - | - | 0.98 | 0.43 | 0.50 | 0.98 | 0.37 |
| black.cloud | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| missing.links | 0.12 | 0.51 | 0.04 | 0.44 | 0.26 | 0.28 | 0.58 | 0.69 | 0.51 | 0.51 | 0.75 | - | 0.02 | 0.24 | 0.00 | 0.00 | - | 0.98 | - | - | 0.27 | 0.14 | 0.91 | 0.13 |
| | core.global.turnover | core.mail.turnover | core.code.turnover | ratio.smelly.quitters | ratio.smelly.devs | global.truck | mail.truck | code.truck | closeness.centr | betweenness.centr | degree.centr | global.mod | mail.mod | code.mod | density | mail.only.core.devs | code.only.core.devs | ml.code.core.devs | ratio.mail.only.core | ratio.code.only.core | ratio.ml.code.core | | | |
| org.silo | 0.35 | 0.66 | 0.73 | 0.89 | 0.27 | 0.22 | 0.10 | 0.23 | 0.65 | 0.72 | 0.21 | 0.52 | 0.67 | 0.07 | 0.75 | 0.51 | 0.00 | 0.19 | 0.02 | 0.01 | 0.43 | | | |
| prima.donnas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| radio.silence | 0.37 | 0.59 | 0.92 | 0.92 | 0.00 | 0.15 | 0.07 | 1.00 | 0.18 | 0.06 | 0.29 | 0.12 | 0.00 | 0.17 | 0.71 | 0.89 | 0.40 | 0.49 | 0.90 | 0.18 | 0.61 | | | |
| black.cloud | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| missing.links | 0.59 | 0.78 | 0.69 | 0.77 | 0.45 | 0.17 | 0.13 | 0.17 | 0.66 | 0.72 | 0.17 | 0.76 | 0.40 | 0.10 | 0.52 | 0.53 | 0.01 | 0.12 | 0.02 | 0.05 | 0.32 | | | |