

Learning a Codebase

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1 Repository

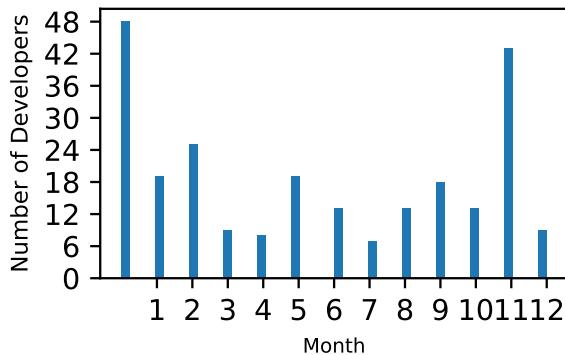
1.1 Glossary - Summary

- The founder developer starts in the first six months of a project.
- The late joiner developers start after six months.
- Sustained developers make 50 or more commits and commit for 250 days or more.
- Transient developers have fewer commits or commit for a shorter period.

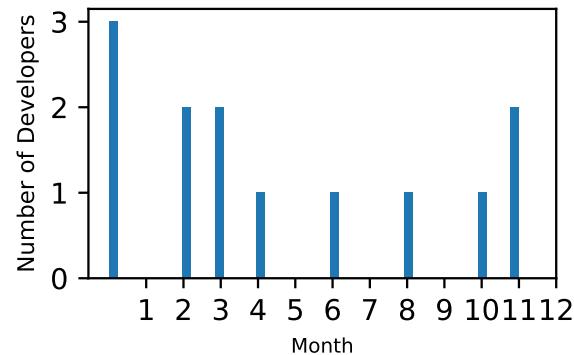
2 Repository: 14

2.1 Percentage touched reached - 14 For component touched for to reach 70.0 percentage known

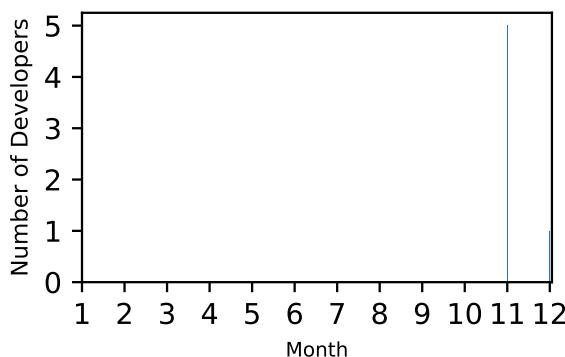
A histogram of number of developers that have touched a percentage of packages each period



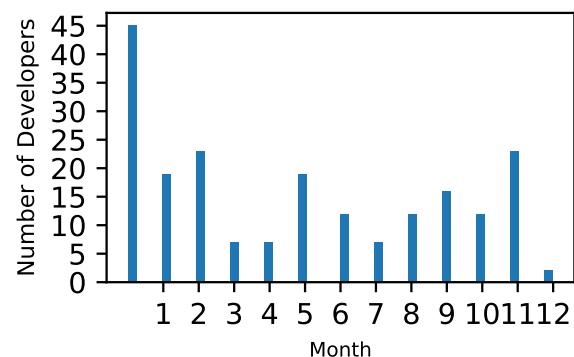
(a) All



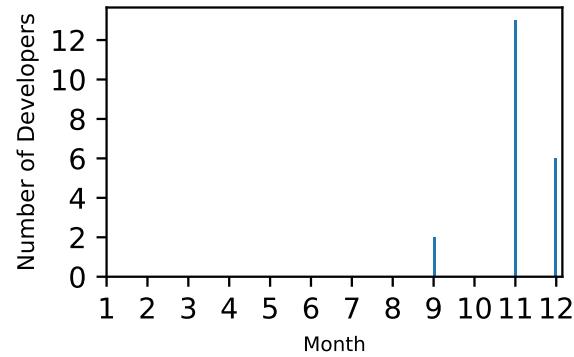
(b) transient founder



(c) sustained founder

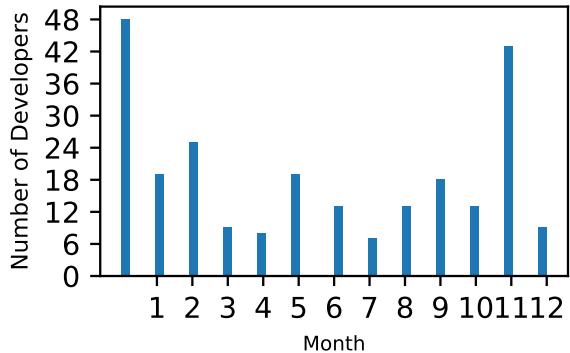


(d) transient later joiner

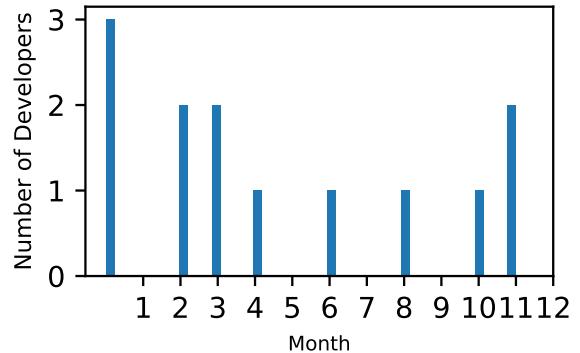


(e) sustained later joiner

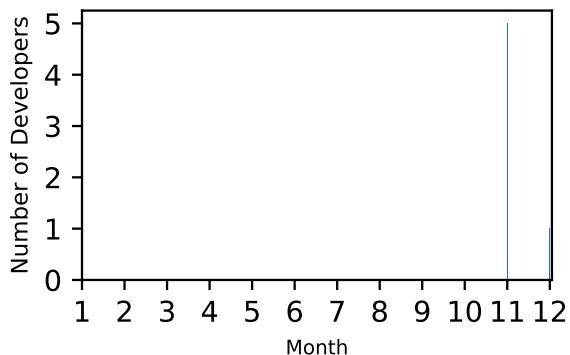
Figure 1: A histogram of number of developers that have touched a percentage (70.0%) of packages each month of a year.



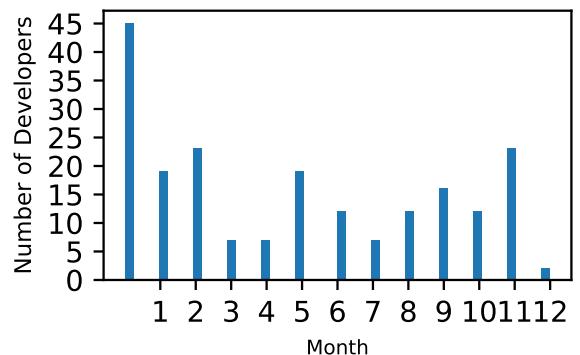
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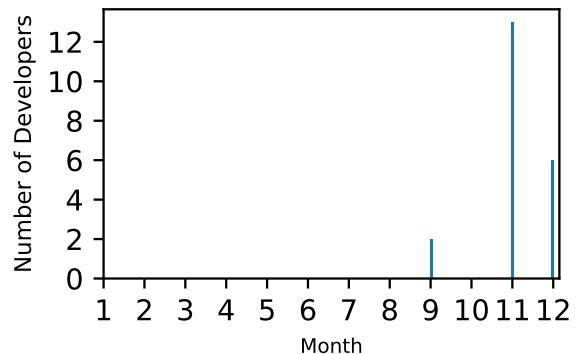
(b) transient founder



(c) sustained founder

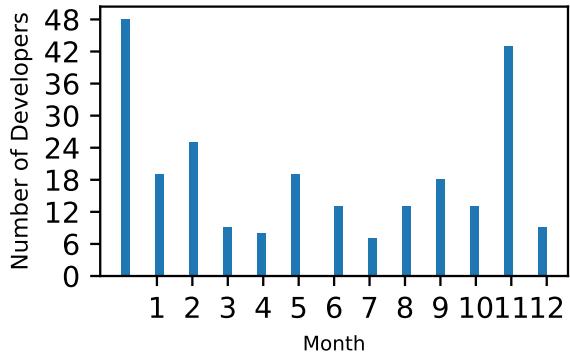


(d) transient later joiner

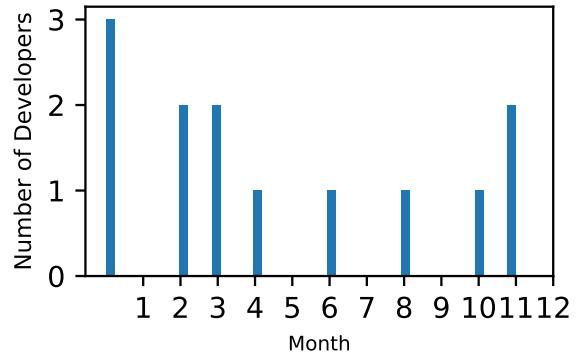


(e) sustained later joiner

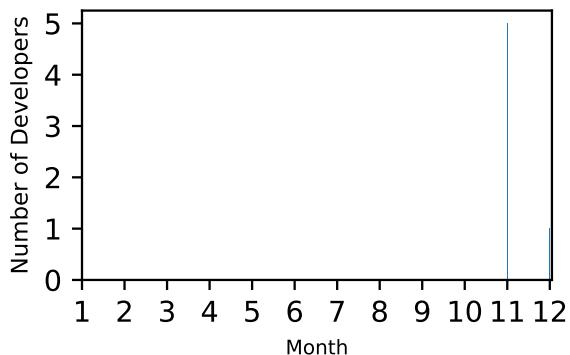
Figure 2: A histogram of number of developers that have touched a percentage (70.0%) of classes each month of a year.



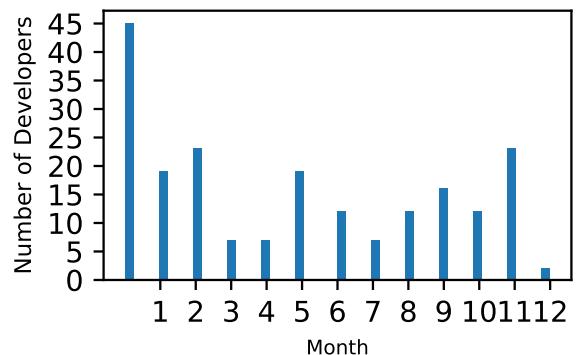
(a) All



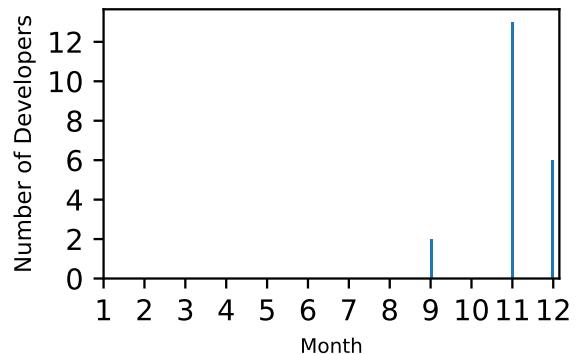
(b) transient founder



(c) sustained founder



(d) transient later joiner

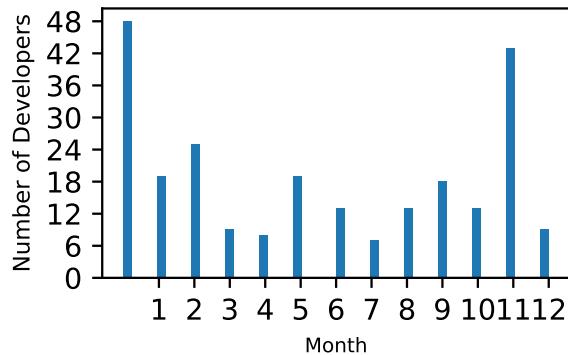


(e) sustained later joiner

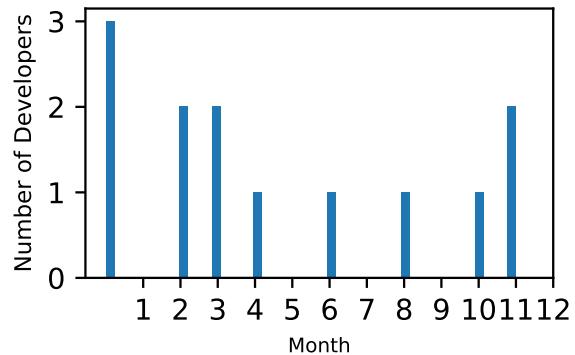
Figure 3: A histogram of number of developers that have touched a percentage (70.0%) of methods each month of a year.

2.2 Percentage touched reached - 14 For component touched for to reach 80.0 percentage known

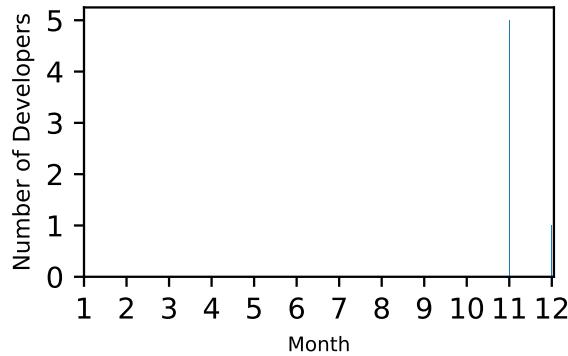
A histogram of number of developers that have touched a percentage of packages each period



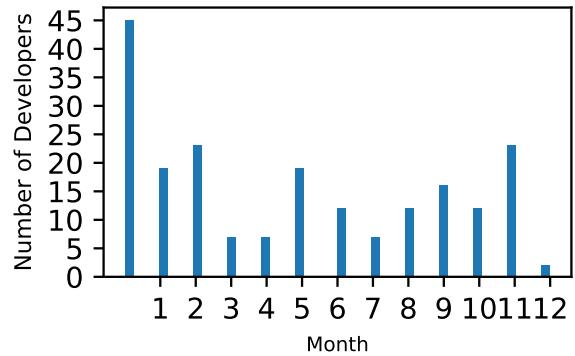
(a) All



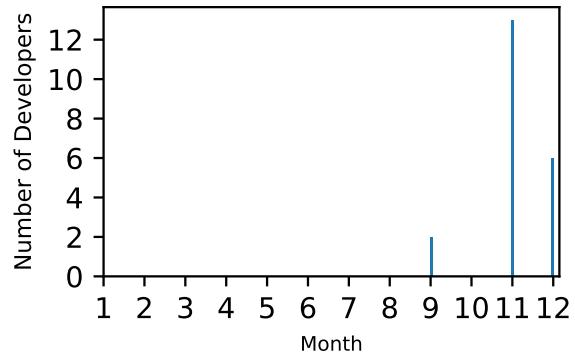
(b) transient founder



(c) sustained founder

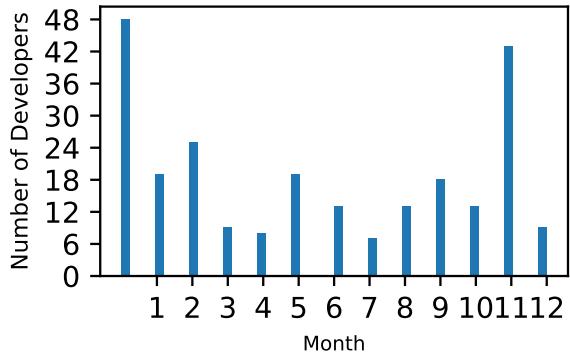


(d) transient later joiner

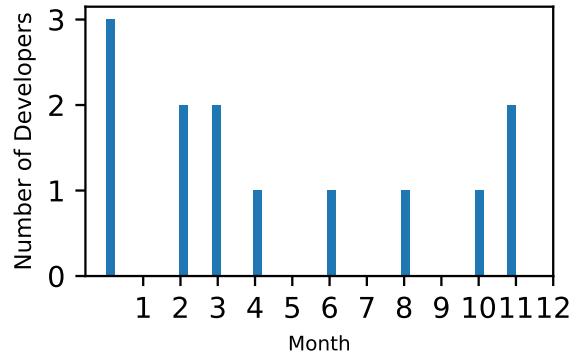


(e) sustained later joiner

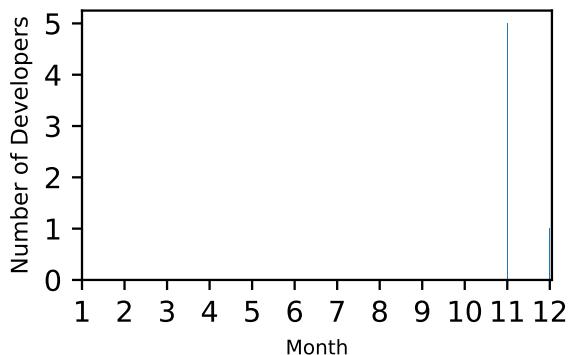
Figure 4: A histogram of number of developers that have touched a percentage (80.0%) of packages each month of a year.



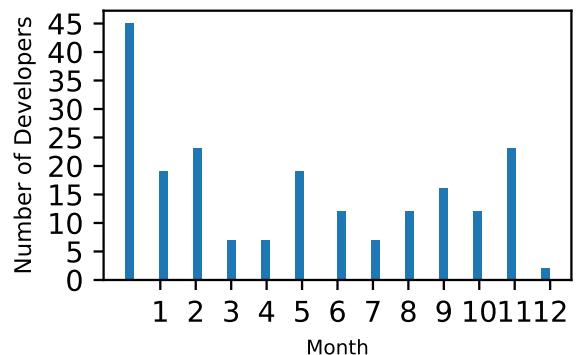
(a) All



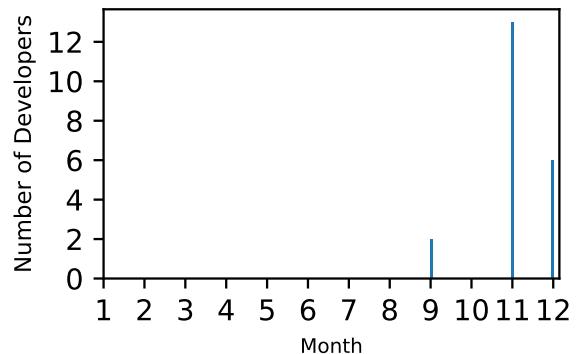
(b) transient founder



(c) sustained founder

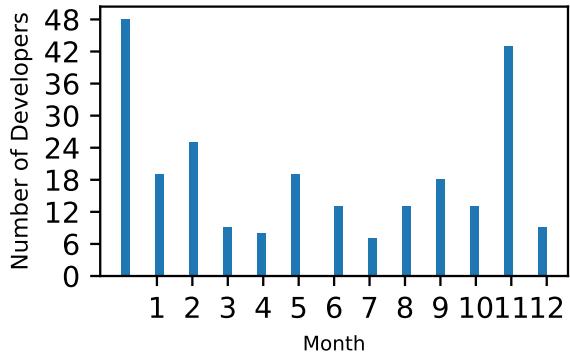


(d) transient later joiner

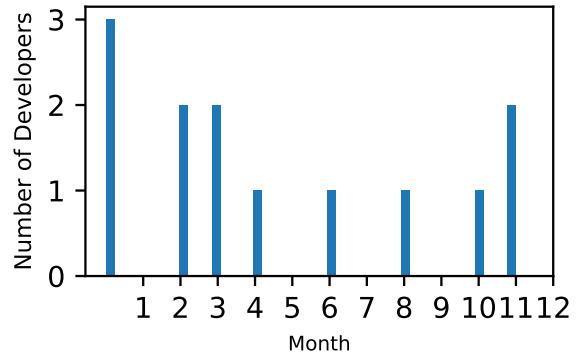


(e) sustained later joiner

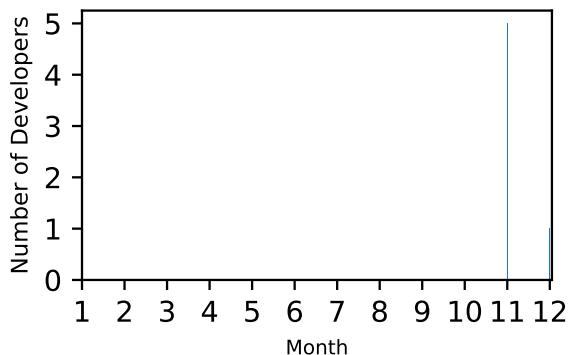
Figure 5: A histogram of number of developers that have touched a percentage (80.0%) of classes each month of a year.



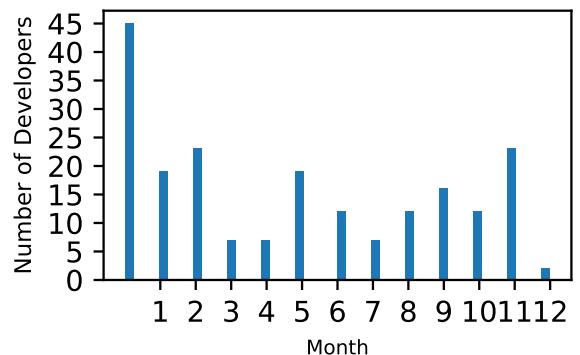
(a) All



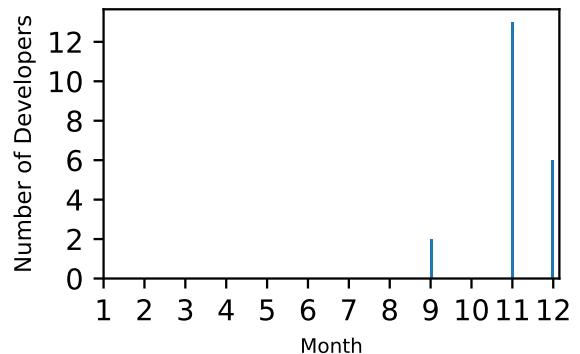
(b) transient founder



(c) sustained founder



(d) transient later joiner

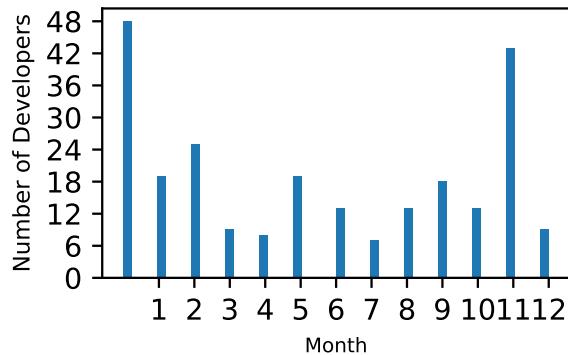


(e) sustained later joiner

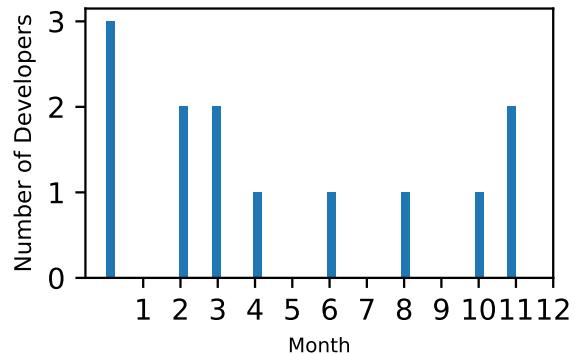
Figure 6: A histogram of number of developers that have touched a percentage (80.0%) of methods each month of a year.

2.3 Percentage touched reached - 14 For component touched for to reach 90.0 percentage known

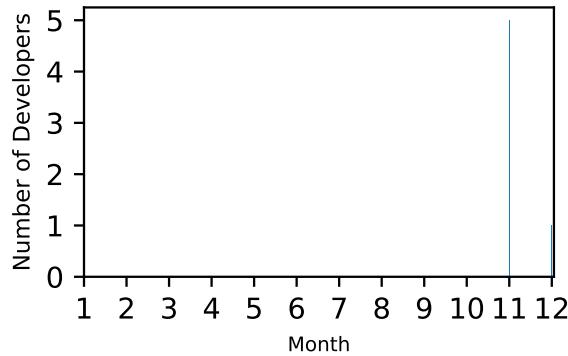
A histogram of number of developers that have touched a percentage of packages each period



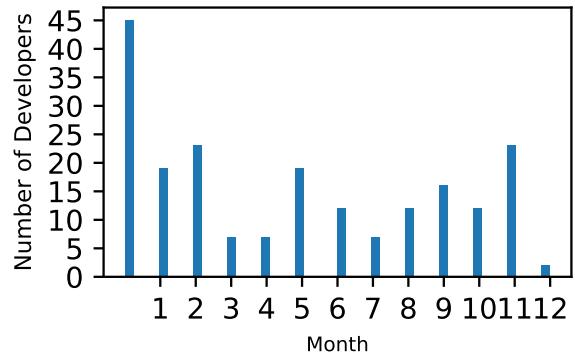
(a) All



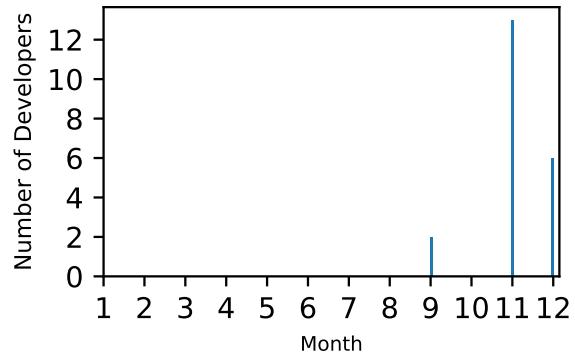
(b) transient founder



(c) sustained founder

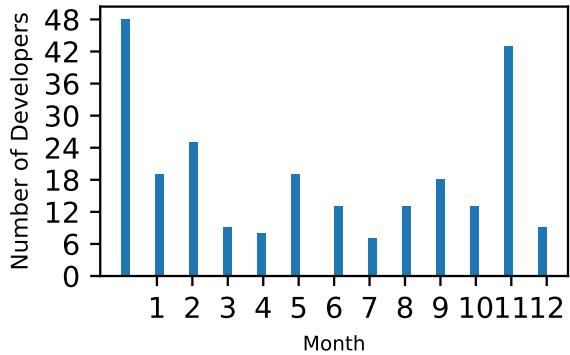


(d) transient later joiner

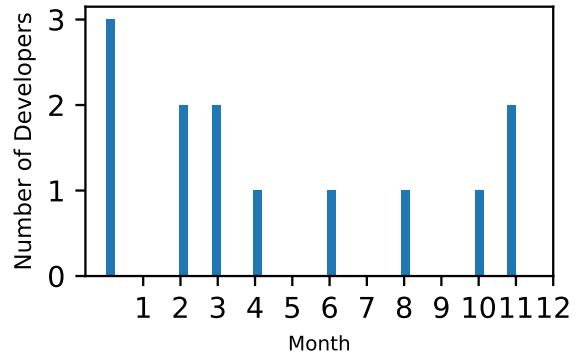


(e) sustained later joiner

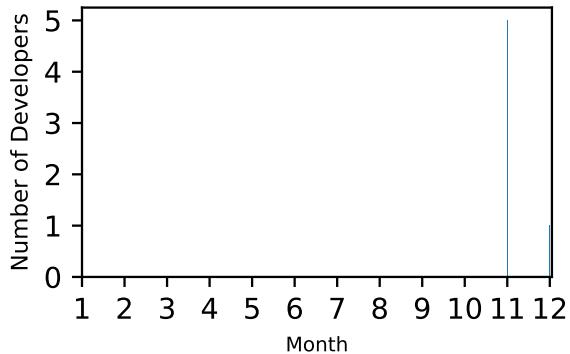
Figure 7: A histogram of number of developers that have touched a percentage (90.0%) of packages each month of a year.



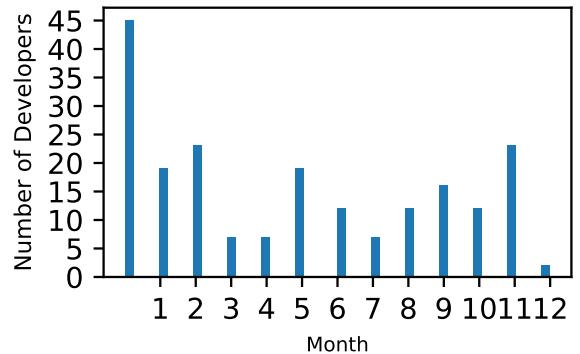
(a) All



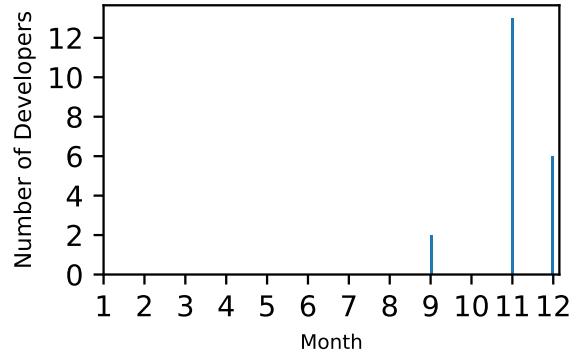
(b) transient founder



(c) sustained founder

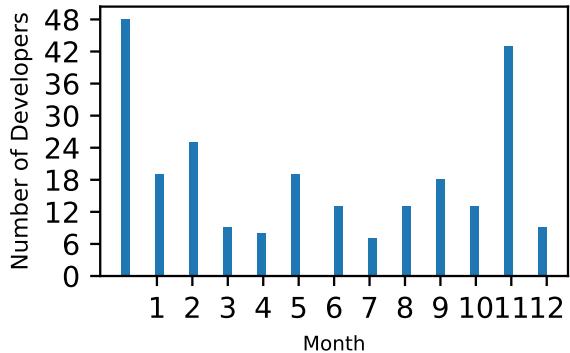


(d) transient later joiner

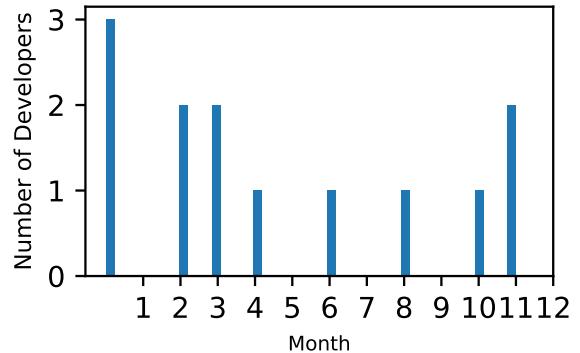


(e) sustained later joiner

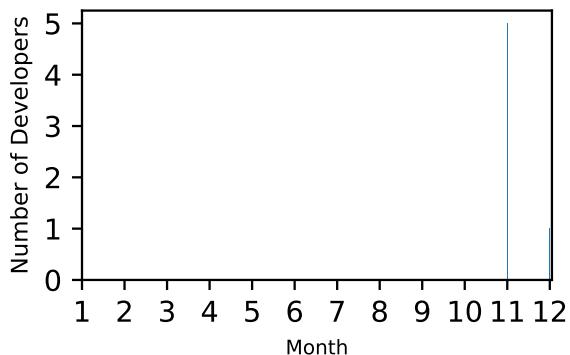
Figure 8: A histogram of number of developers that have touched a percentage (90.0%) of classes each month of a year.



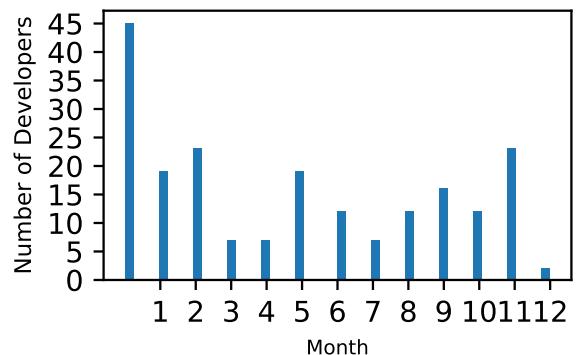
(a) All



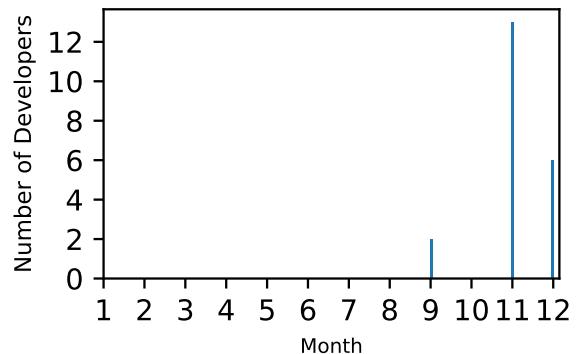
(b) transient founder



(c) sustained founder



(d) transient later joiner



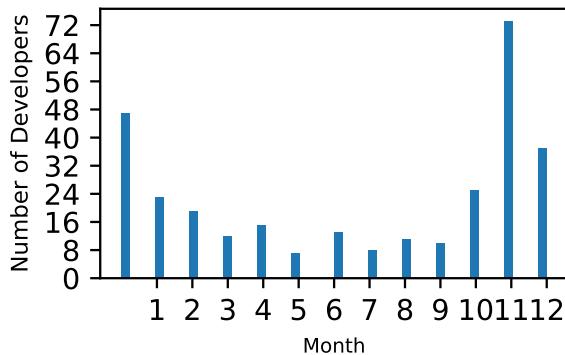
(e) sustained later joiner

Figure 9: A histogram of number of developers that have touched a percentage (90.0%) of methods each month of a year.

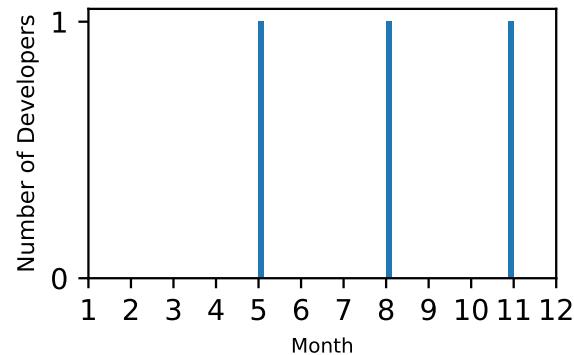
3 Repository: 21

3.1 Percentage touched reached - 21 For component touched for to reach 70.0 percentage known

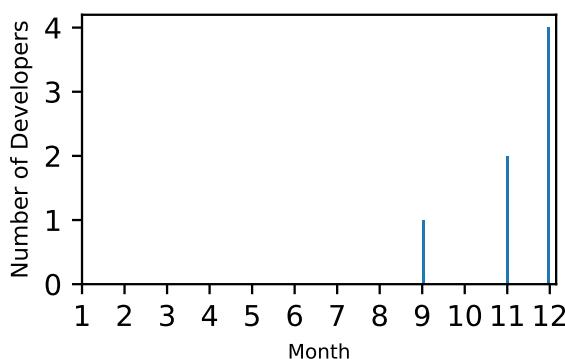
A histogram of number of developers that have touched a percentage of packages each period



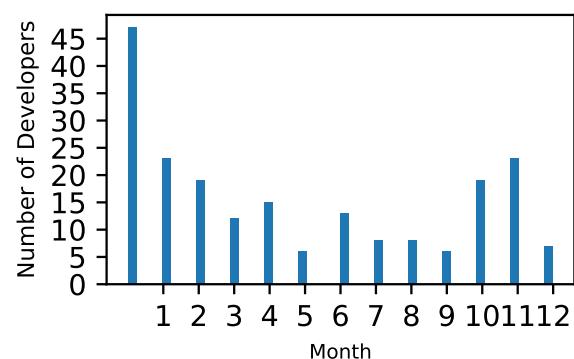
(a) All



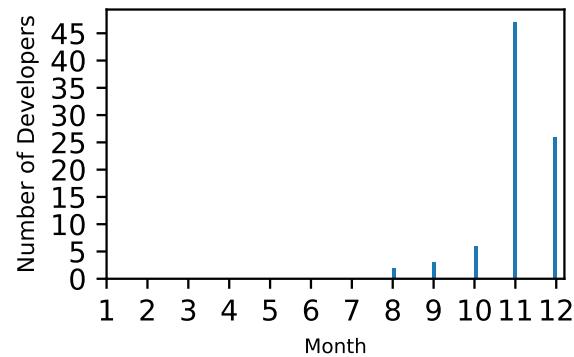
(b) transient founder



(c) sustained founder

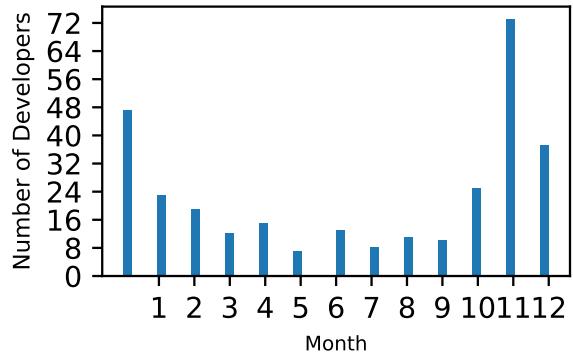


(d) transient later joiner

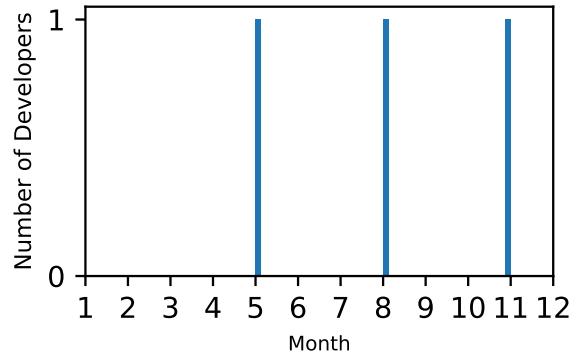


(e) sustained later joiner

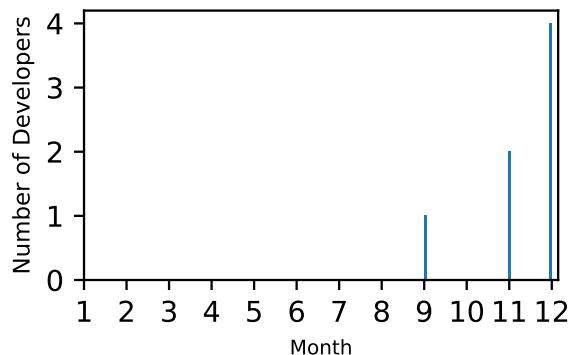
Figure 10: A histogram of number of developers that have touched a percentage (70.0%) of packages each month of a year.



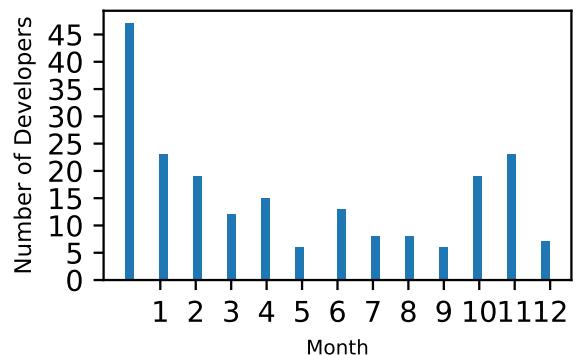
(a) All



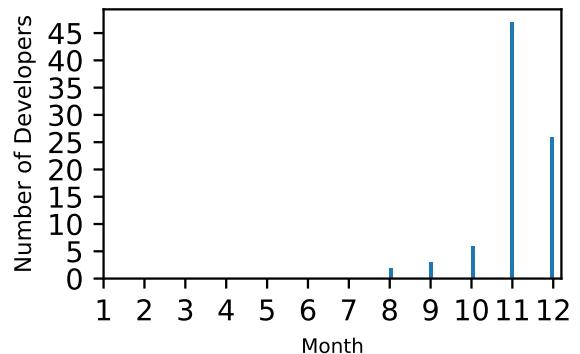
(b) transient founder



(c) sustained founder

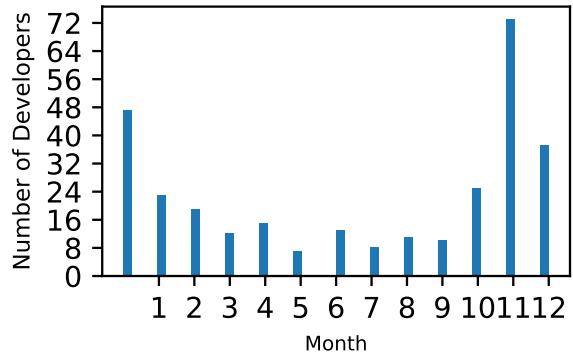


(d) transient later joiner

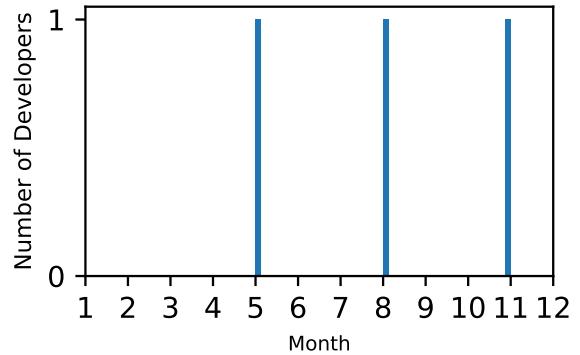


(e) sustained later joiner

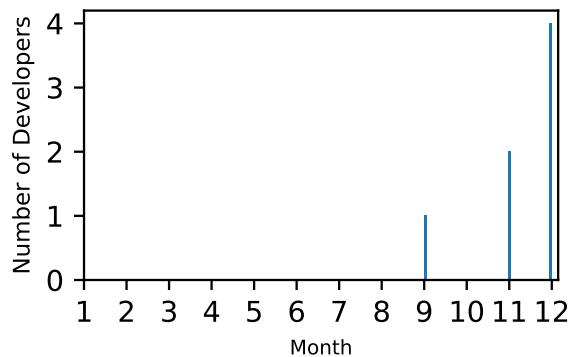
Figure 11: A histogram of number of developers that have touched a percentage (70.0%) of classes each month of a year.



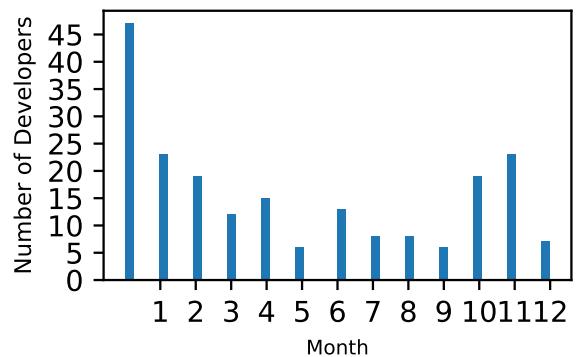
(a) All



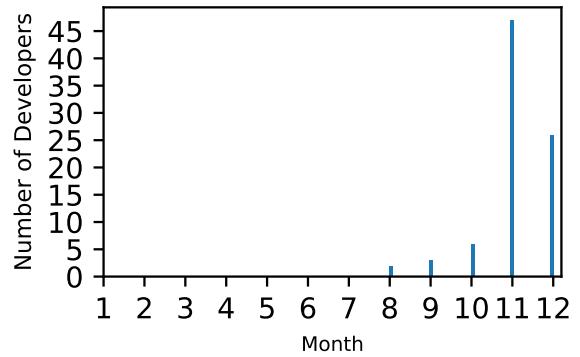
(b) transient founder



(c) sustained founder



(d) transient later joiner

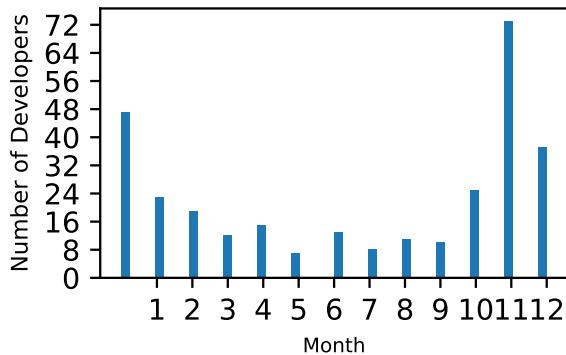


(e) sustained later joiner

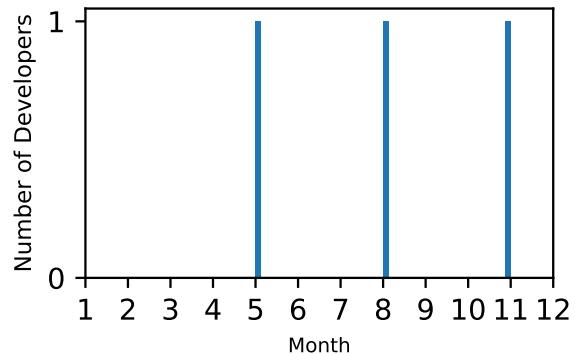
Figure 12: A histogram of number of developers that have touched a percentage (70.0%) of methods each month of a year.

3.2 Percentage touched reached - 21 For component touched for to reach 80.0 percentage known

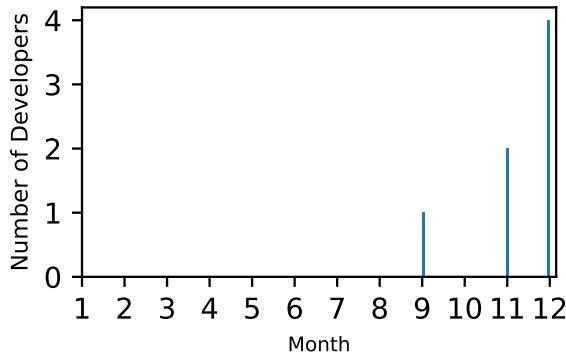
A histogram of number of developers that have touched a percentage of packages each period



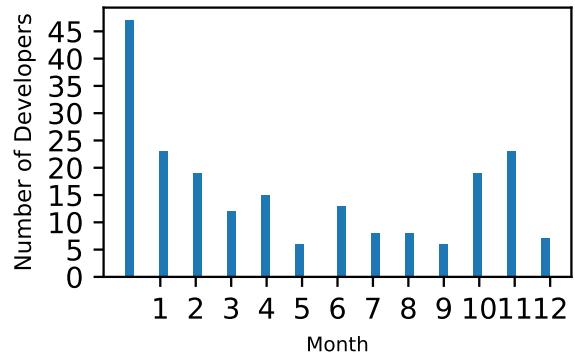
(a) All



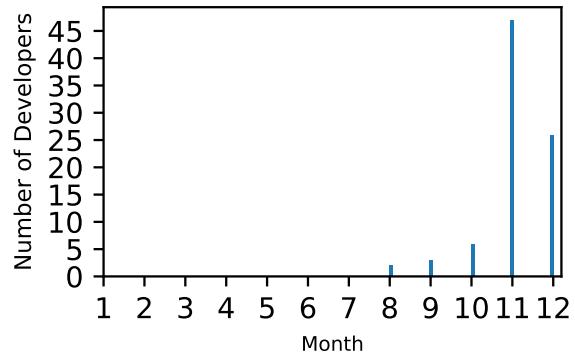
(b) transient founder



(c) sustained founder

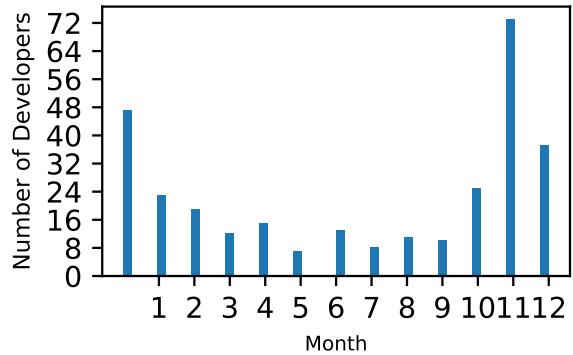


(d) transient later joiner

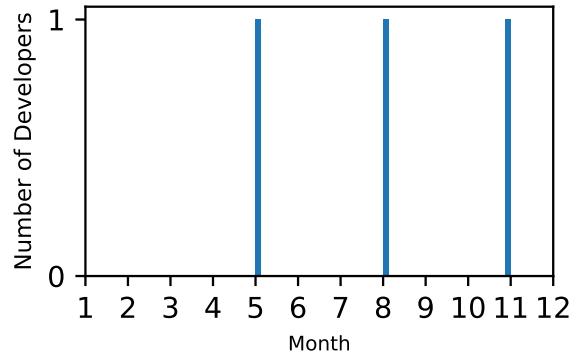


(e) sustained later joiner

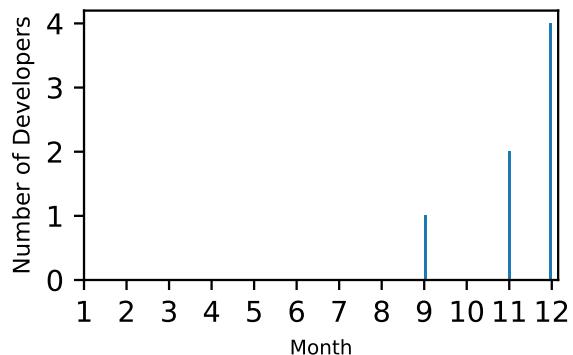
Figure 13: A histogram of number of developers that have touched a percentage (80.0%) of packages each month of a year.



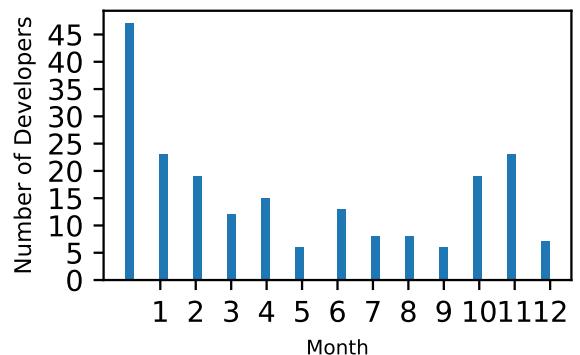
(a) All



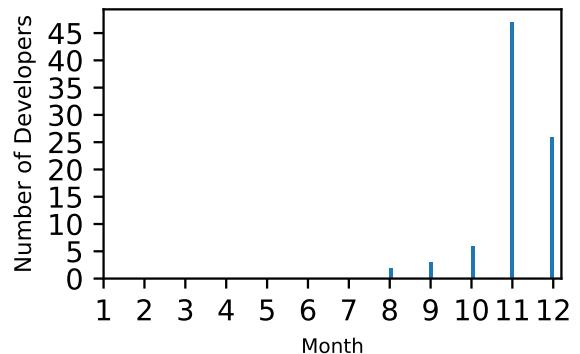
(b) transient founder



(c) sustained founder

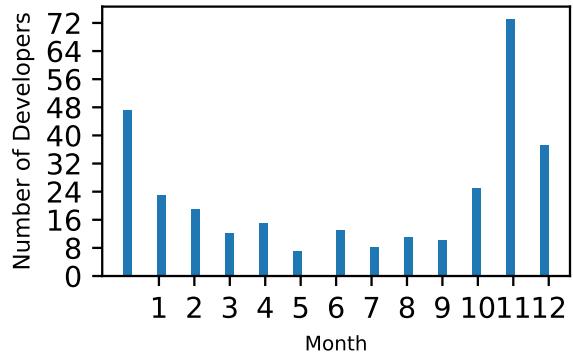


(d) transient later joiner

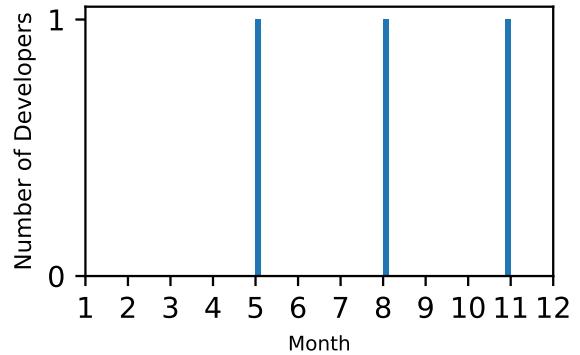


(e) sustained later joiner

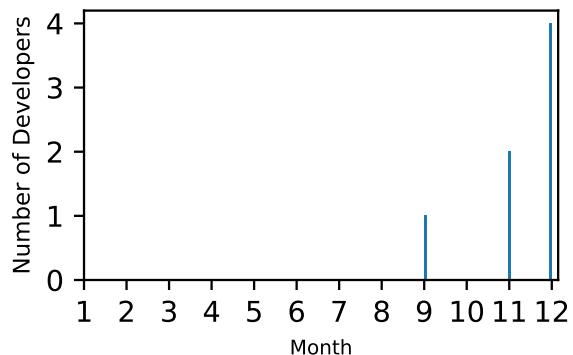
Figure 14: A histogram of number of developers that have touched a percentage (80.0%) of classes each month of a year.



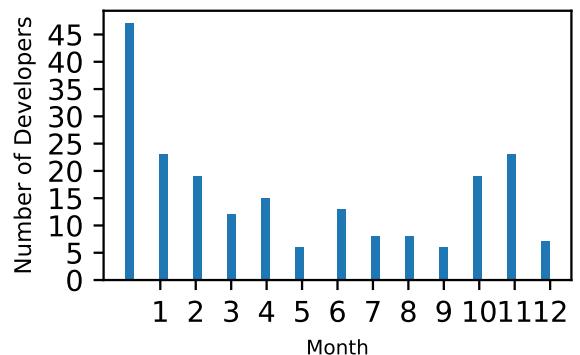
(a) All



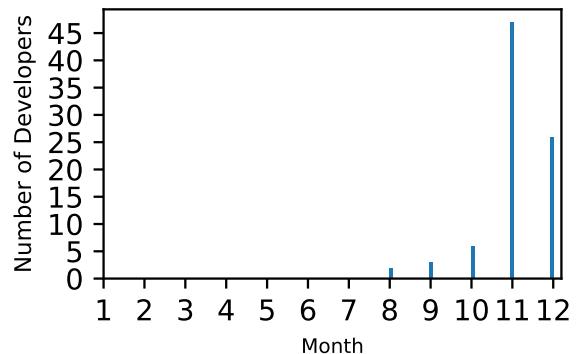
(b) transient founder



(c) sustained founder



(d) transient later joiner

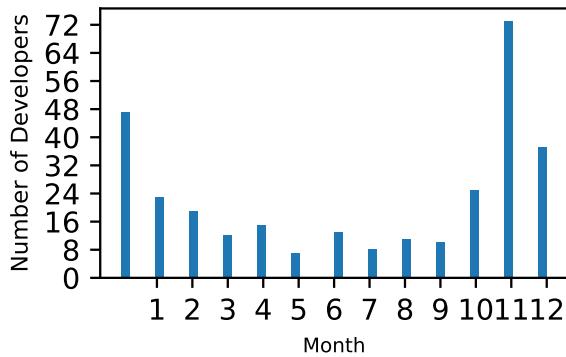


(e) sustained later joiner

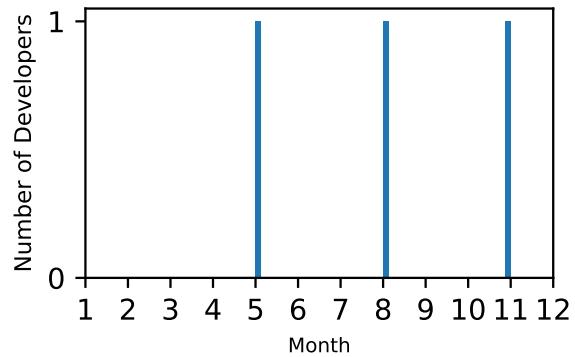
Figure 15: A histogram of number of developers that have touched a percentage (80.0%) of methods each month of a year.

3.3 Percentage touched reached - 21 For component touched for to reach 90.0 percentage known

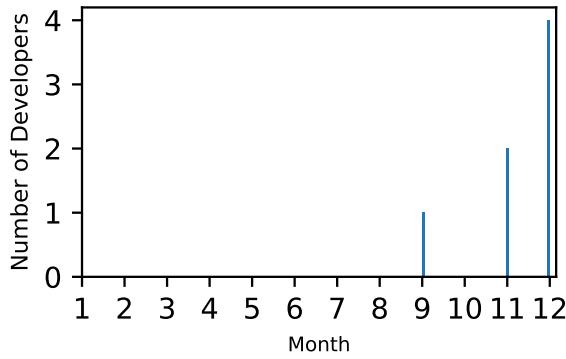
A histogram of number of developers that have touched a percentage of packages each period



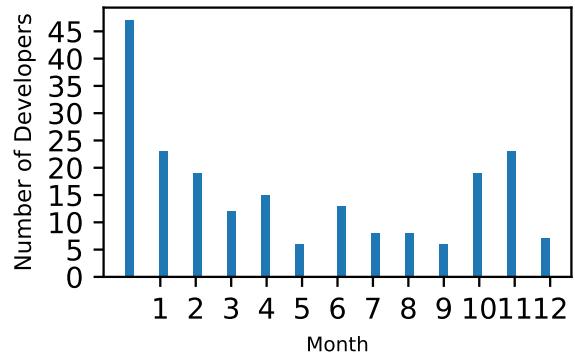
(a) All



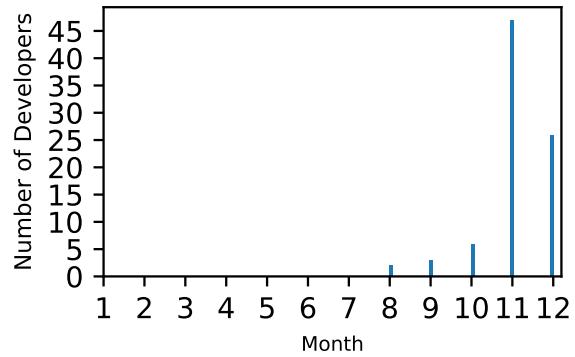
(b) transient founder



(c) sustained founder

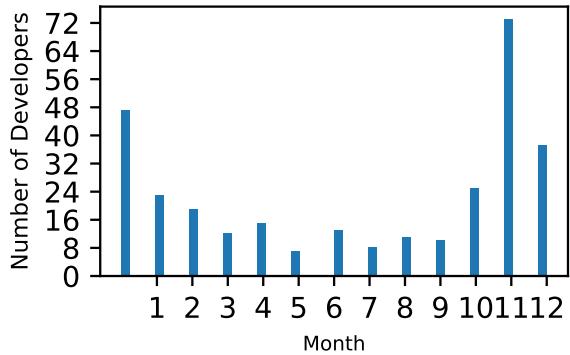


(d) transient later joiner

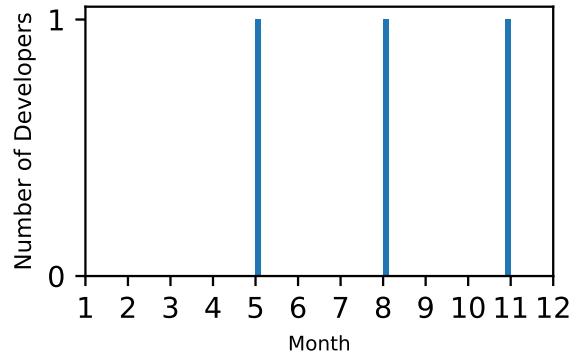


(e) sustained later joiner

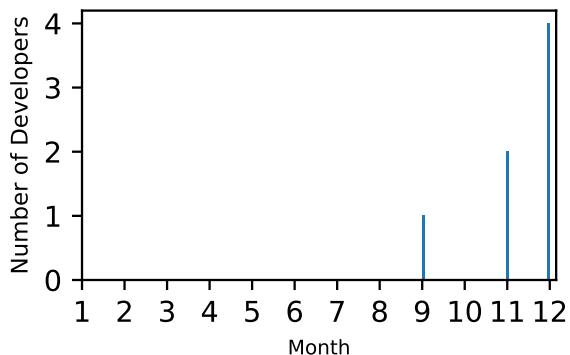
Figure 16: A histogram of number of developers that have touched a percentage (90.0%) of packages each month of a year.



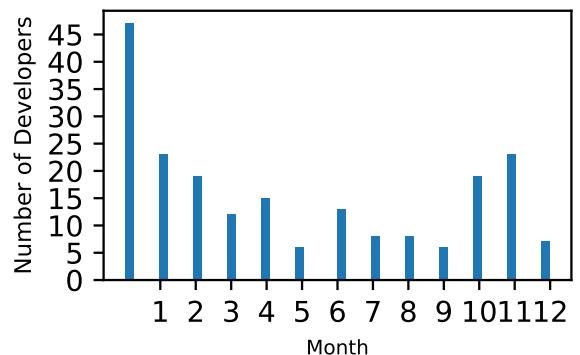
(a) All



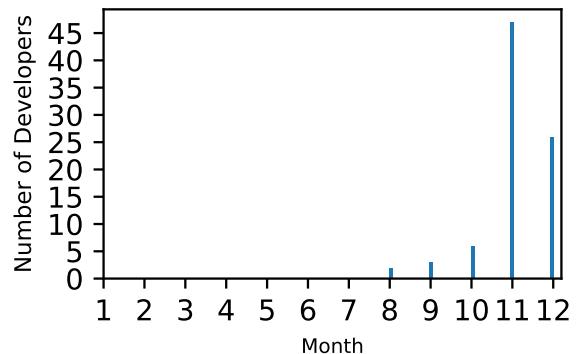
(b) transient founder



(c) sustained founder

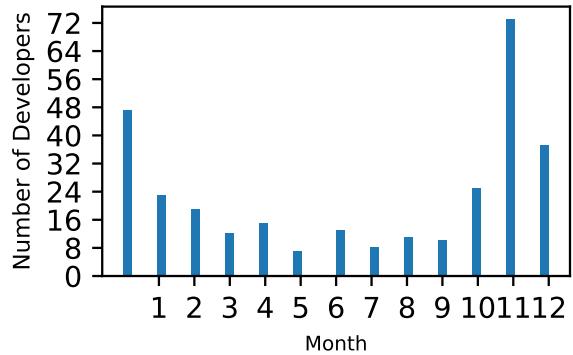


(d) transient later joiner

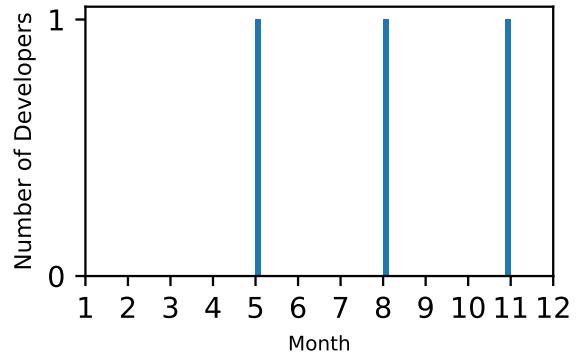


(e) sustained later joiner

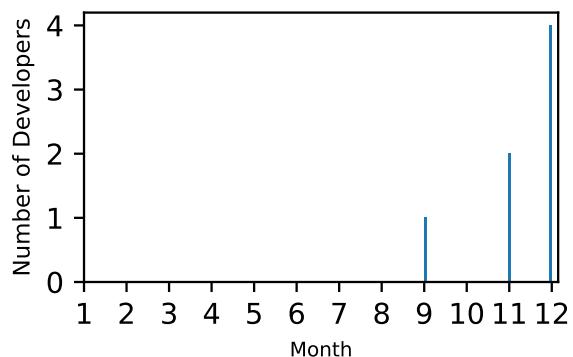
Figure 17: A histogram of number of developers that have touched a percentage (90.0%) of classes each month of a year.



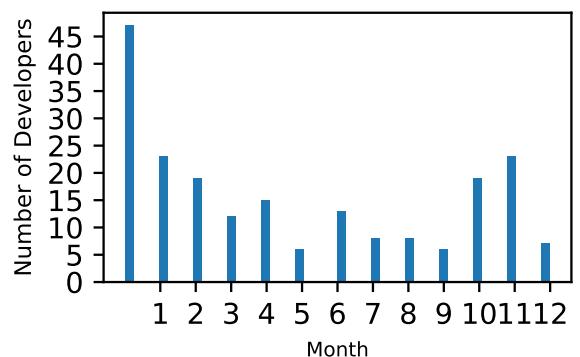
(a) All



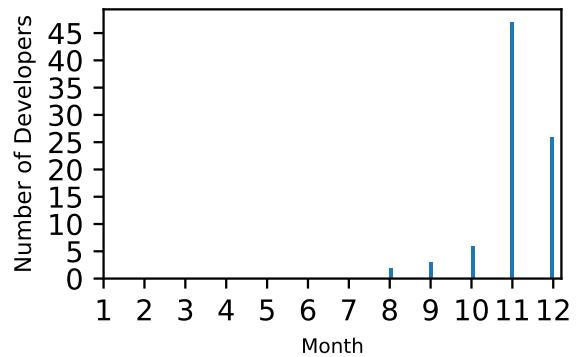
(b) transient founder



(c) sustained founder



(d) transient later joiner



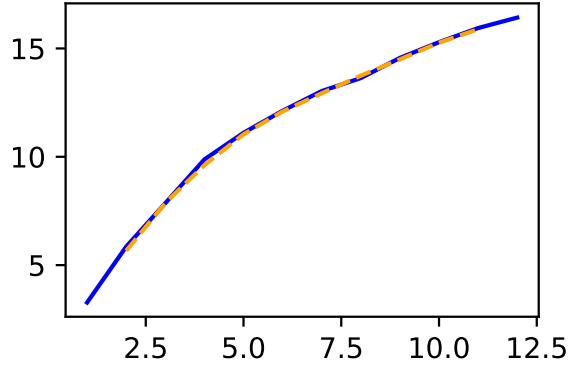
(e) sustained later joiner

Figure 18: A histogram of number of developers that have touched a percentage (90.0%) of methods each month of a year.

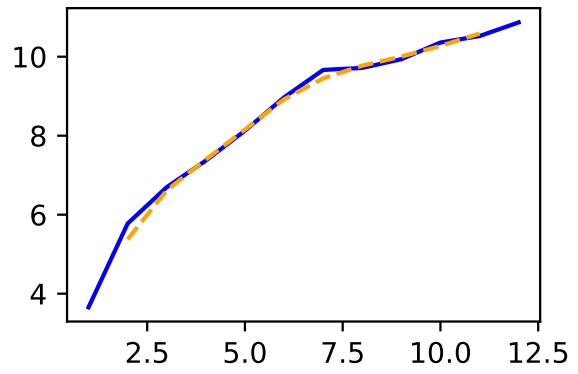
- 4 Repository:** 3
- 5 Repository:** 5
- 6 Repository:** 7
- 7 Repository:** 10
- 8 Repository:** 15
- 9 Repository:** 18
- 10 Repository:** 20
- 11 Repository:** 26
- 12 Repository:** 28
- 13 Repository:** 33
- 14 Repository:** 36
- 15 Repository:** 37
- 16 Repository:** 39

16.1 Smooth moving average - 14 For packages touched for each unit

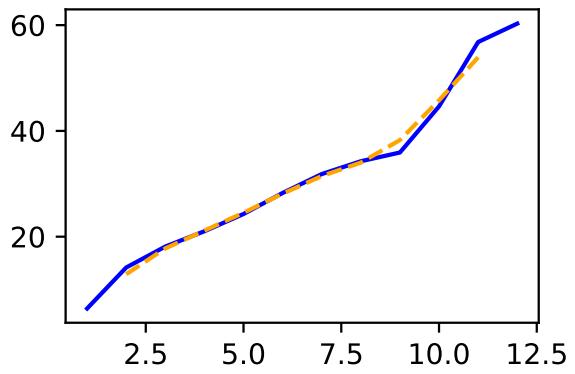
A smooth moving average packages touched on average each period the number of commits to components touched.



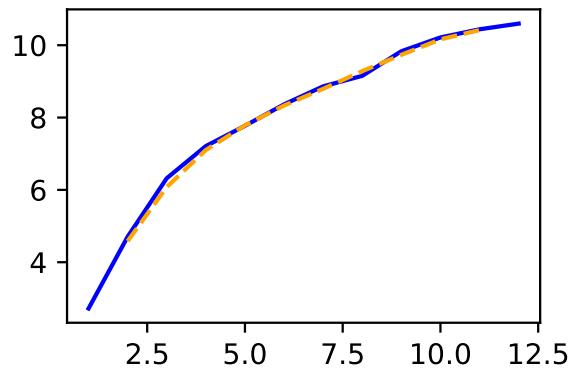
(a) All developers (244) showing packages touched



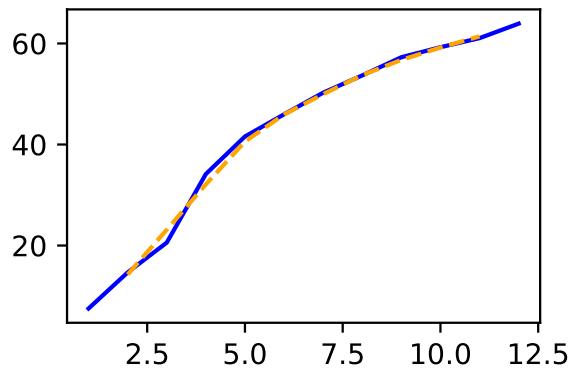
(b) Transient founder developers (13) showing packages touched



(c) Sustained founder developers (6) showing packages touched

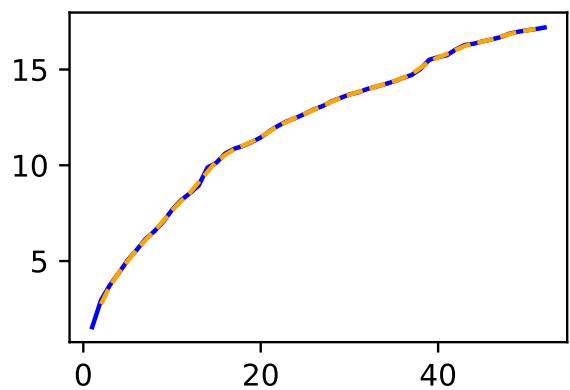


(d) Transient later joiner developers (204) showing packages touched

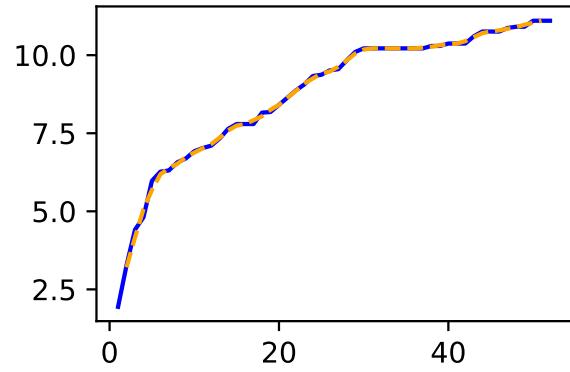


(e) Sustained later joiner developers (21) showing packages touched

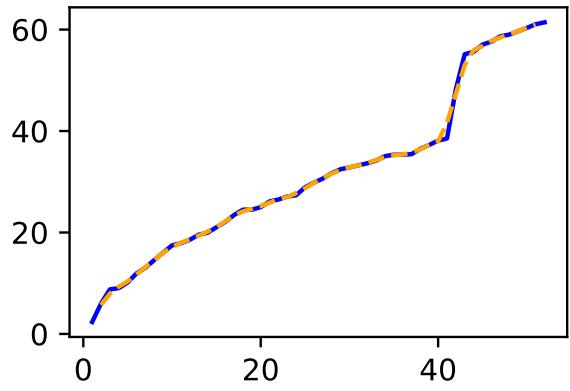
Figure 19: A smooth moving of total packages touched on average each month of a year.



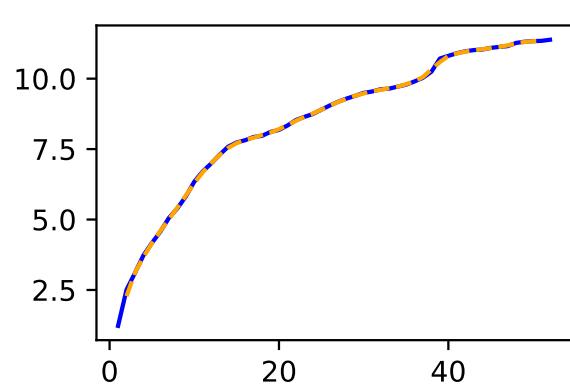
(a) All developers (244) showing packages touched



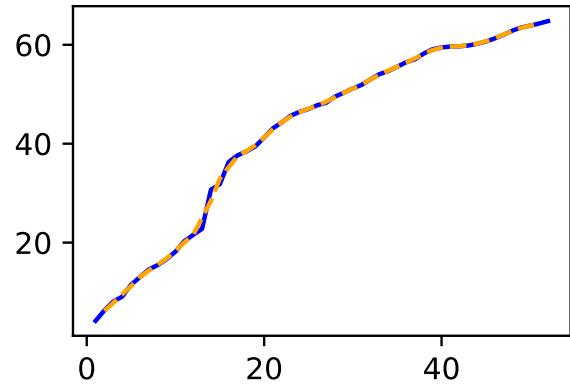
(b) Transient founder developers (13) showing packages touched



(c) Sustained founder developers (6) showing packages touched

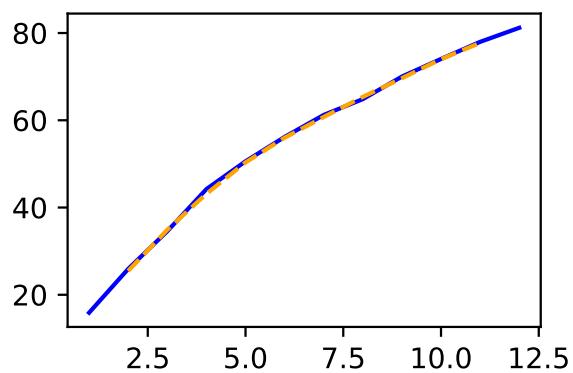


(d) Transient later joiner developers (204) showing packages touched

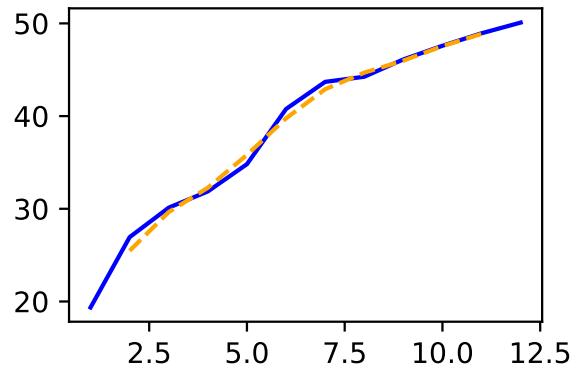


(e) Sustained later joiner developers (21) showing packages touched

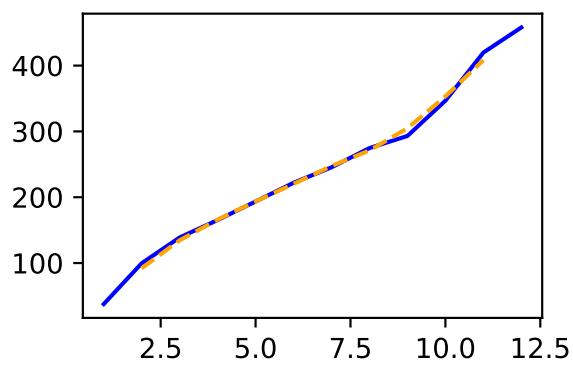
Figure 20: A smooth moving of total packages touched on average each week of a year.



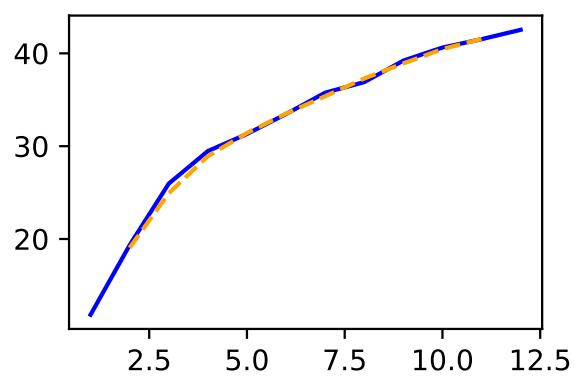
(a) All developers (244) showing classes touched



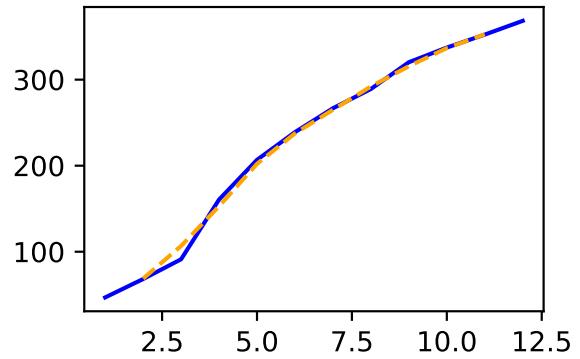
(b) Transient founder developers (13) showing classes touched



(c) Sustained founder developers (6) showing classes touched

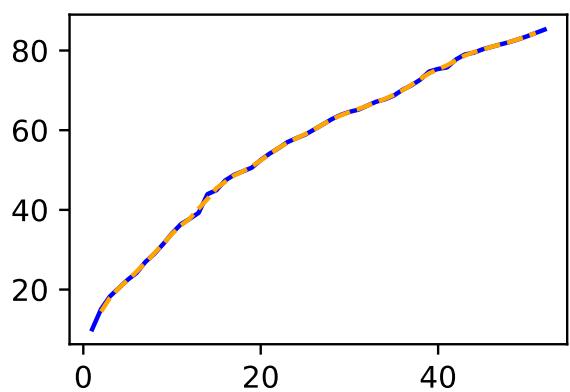


(d) Transient later joiner developers (204) showing classes touched

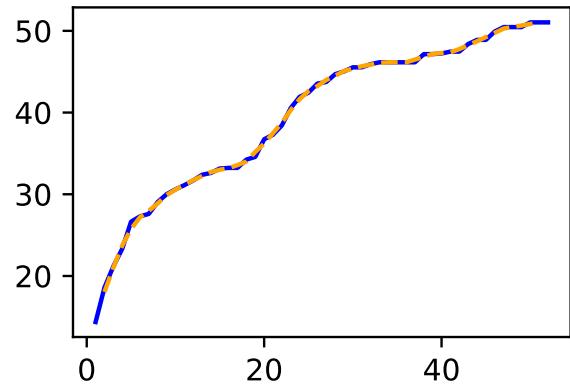


(e) Sustained later joiner developers (21) showing classes touched

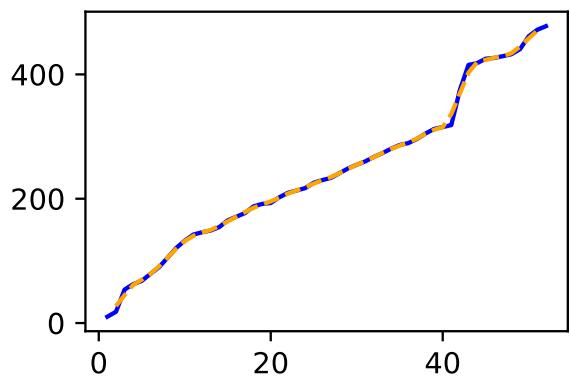
Figure 21: A smooth moving of total classes touched on average each month of a year.



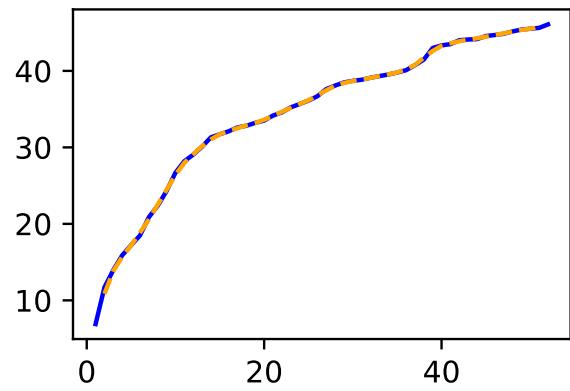
(a) All developers (244) showing classes touched



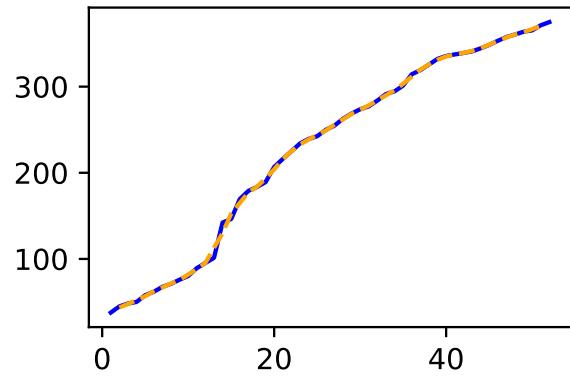
(b) Transient founder developers (13) showing classes touched



(c) Sustained founder developers (6) showing classes touched

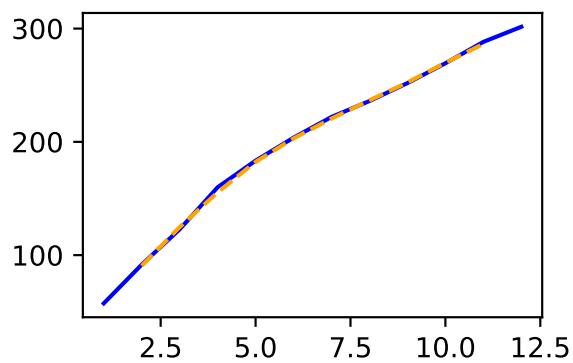


(d) Transient later joiner developers (204) showing classes touched

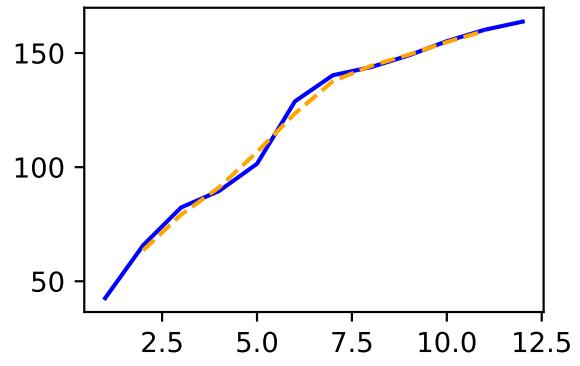


(e) Sustained later joiner developers (21) showing classes touched

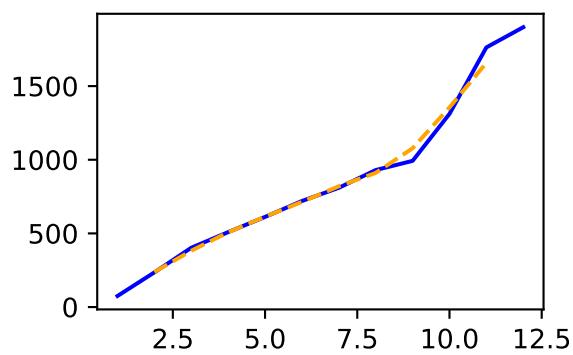
Figure 22: A smooth moving of total classes touched on average each week of a year.



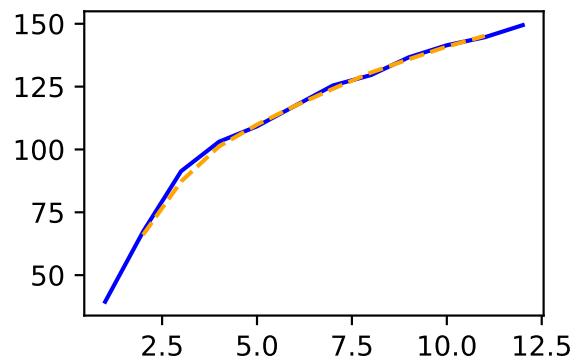
(a) All developers (244) showing methods touched



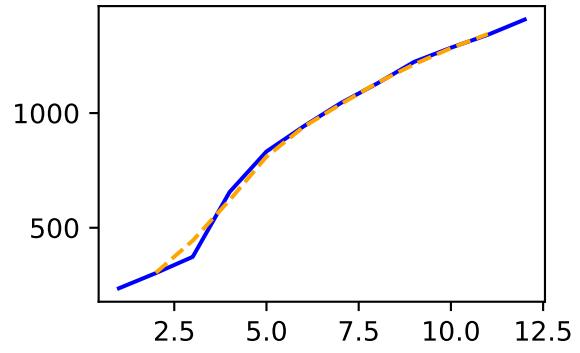
(b) Transient founder developers (13) showing methods touched



(c) Sustained founder developers (6) showing methods touched

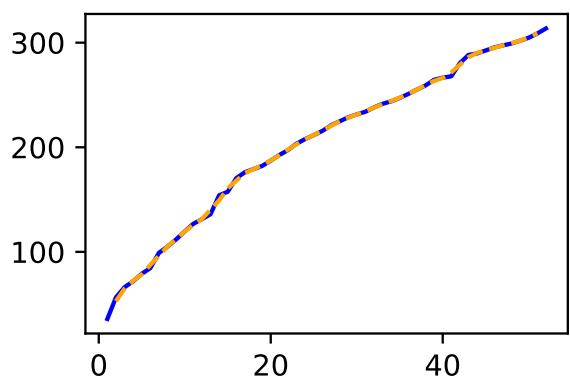


(d) Transient later joiner developers (204) showing methods touched

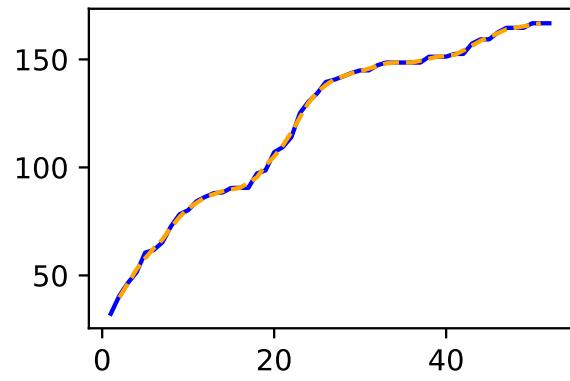


(e) Sustained later joiner developers (21) showing methods touched

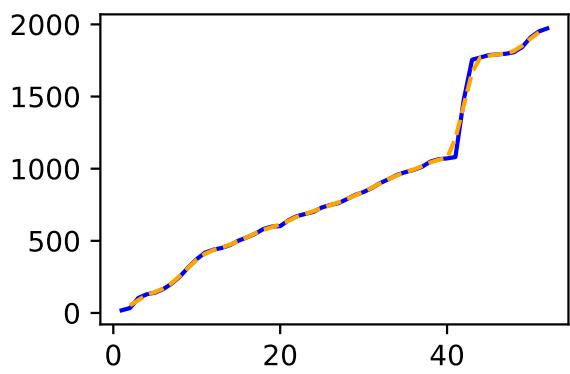
Figure 23: A smooth moving of total methods touched on average each month of a year.



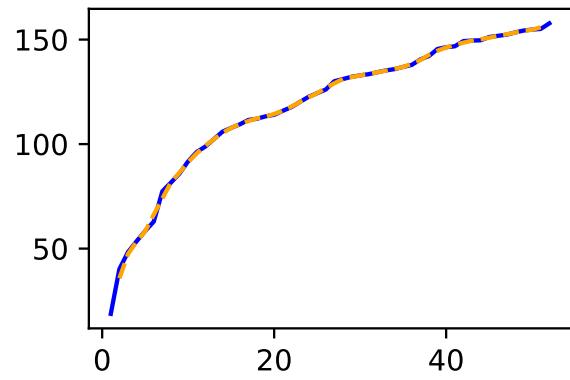
(a) All developers (244) showing methods touched



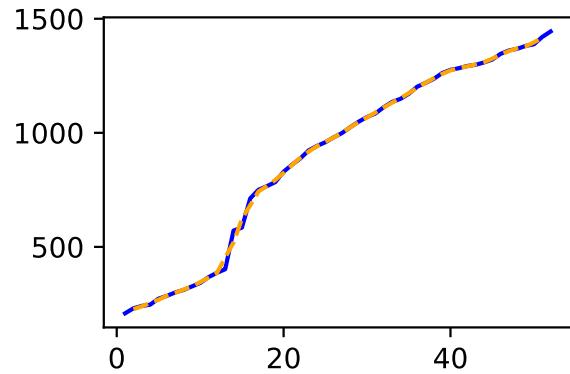
(b) Transient founder developers (13) showing methods touched



(c) Sustained founder developers (6) showing methods touched



(d) Transient later joiner developers (204) showing methods touched

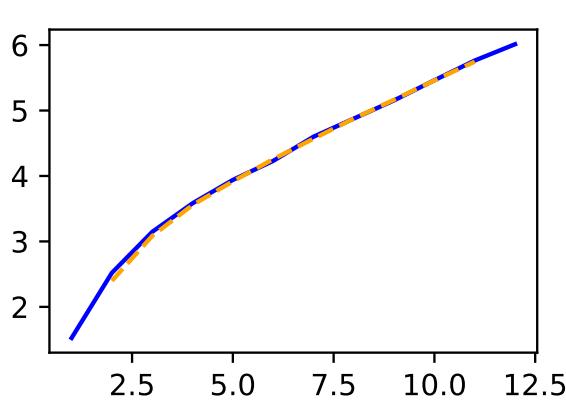


(e) Sustained later joiner developers (21) showing methods touched

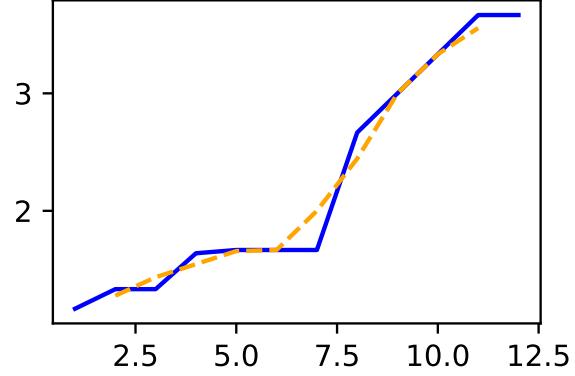
Figure 24: A smooth moving of total methods touched on average each week of a year.

16.2 Smooth moving average - 21 For packages touched for each unit

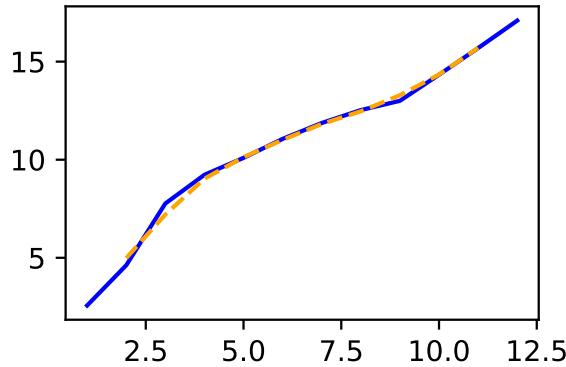
A smooth moving average packages touched on average each period the number of commits to components touched.



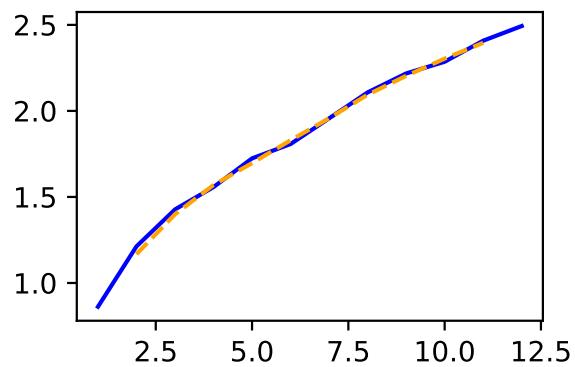
(a) All developers (300) showing packages touched



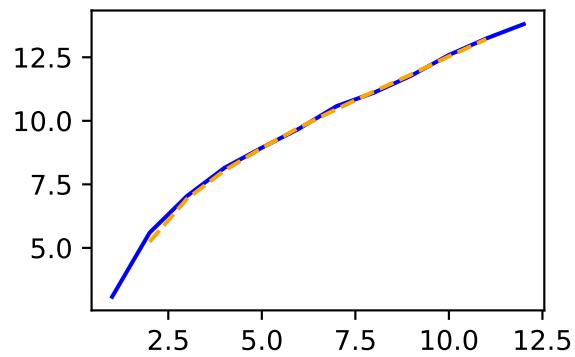
(b) Transient founder developers (3) showing packages touched



(c) Sustained founder developers (7) showing packages touched

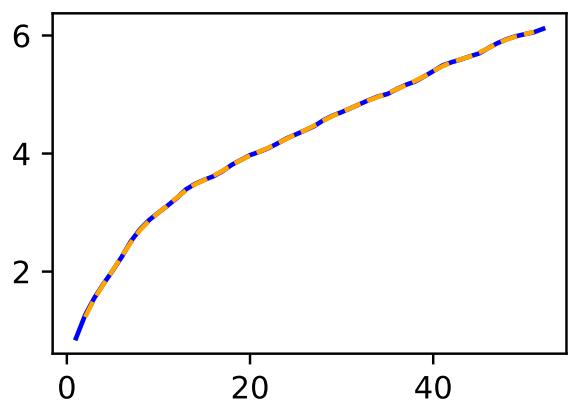


(d) Transient later joiner developers (206) showing packages touched

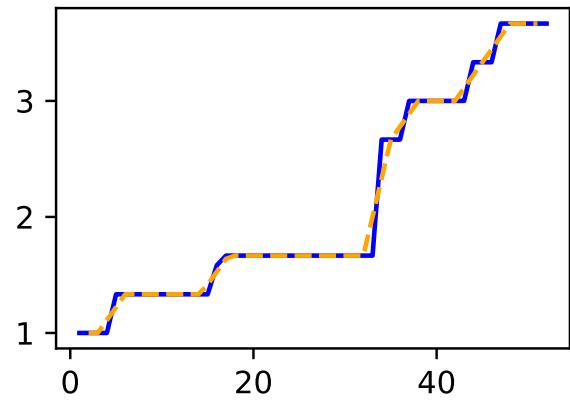


(e) Sustained later joiner developers (84) showing packages touched

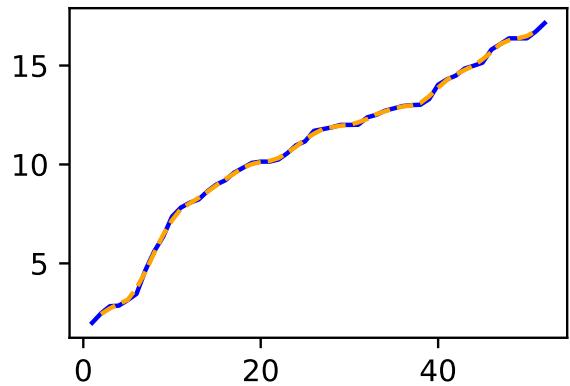
Figure 25: A smooth moving of total packages touched on average each month of a year.



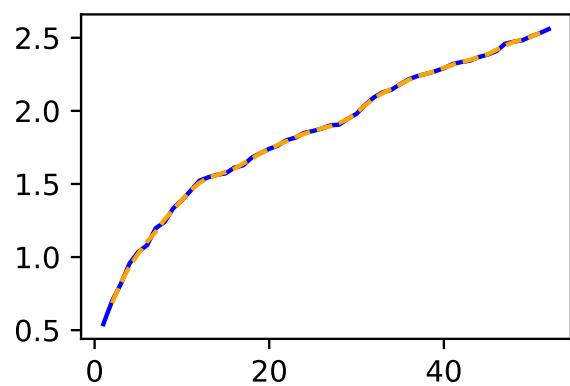
(a) All developers (300) showing packages touched



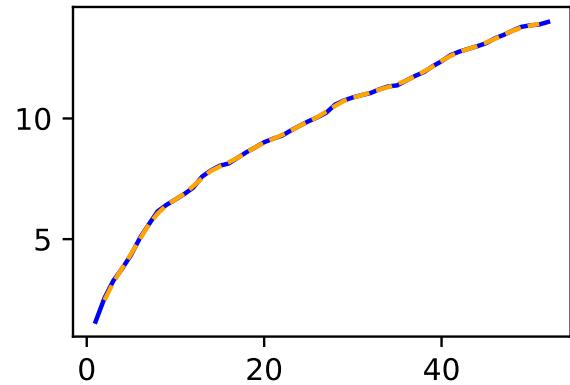
(b) Transient founder developers (3) showing packages touched



(c) Sustained founder developers (7) showing packages touched

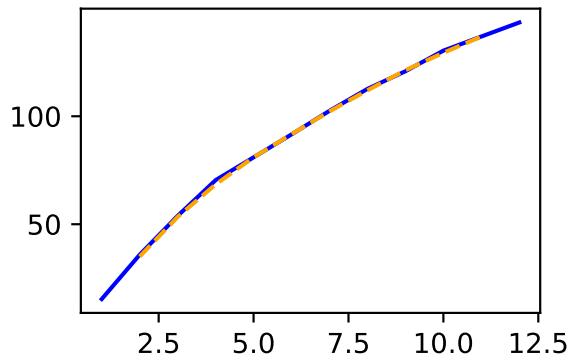


(d) Transient later joiner developers (206) showing packages touched

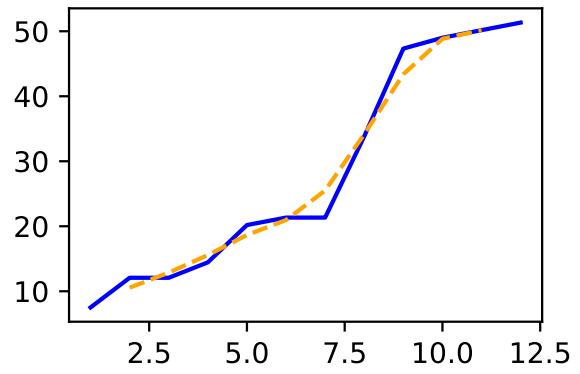


(e) Sustained later joiner developers (84) showing packages touched

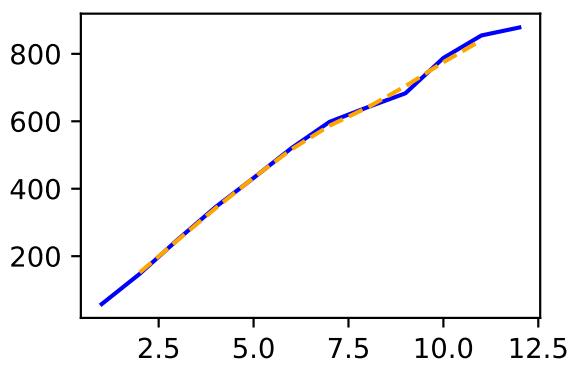
Figure 26: A smooth moving of total packages touched on average each week of a year.



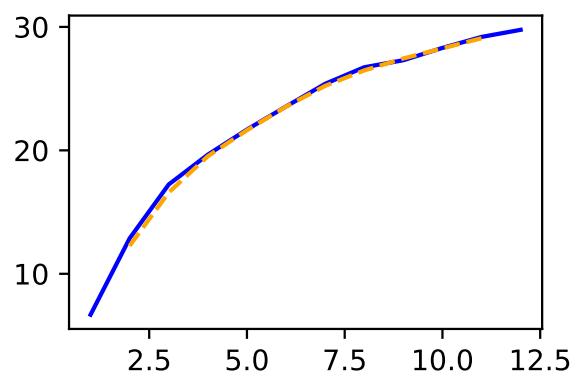
(a) All developers (300) showing classes touched



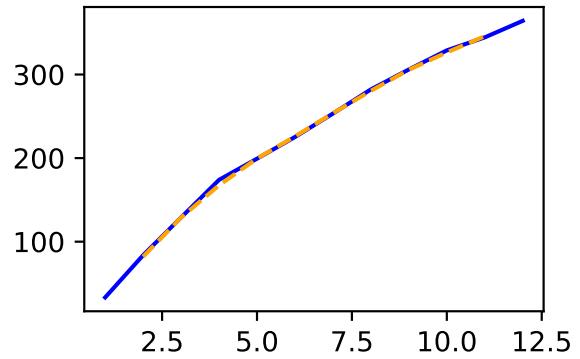
(b) Transient founder developers (3) showing classes touched



(c) Sustained founder developers (7) showing classes touched

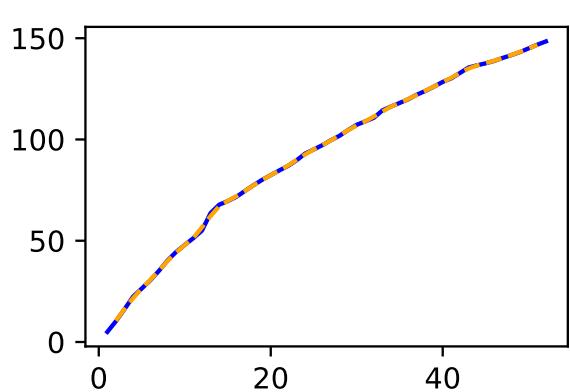


(d) Transient later joiner developers (206) showing classes touched

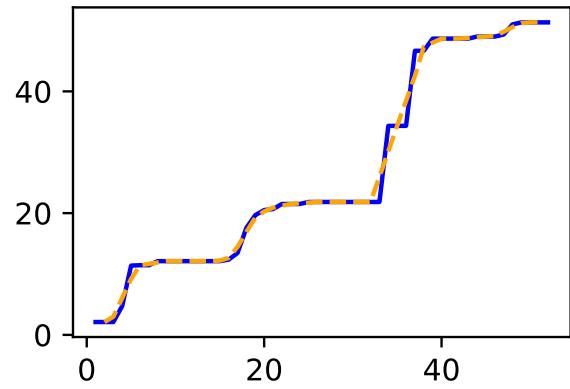


(e) Sustained later joiner developers (84) showing classes touched

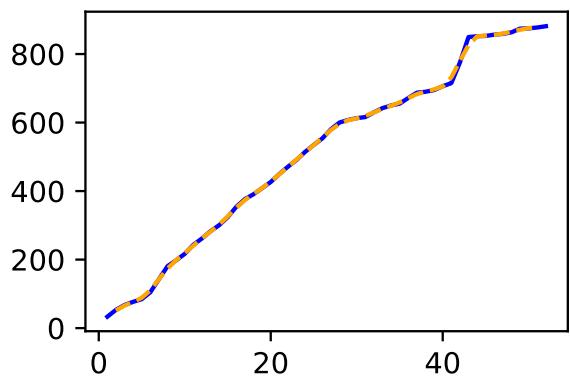
Figure 27: A smooth moving of total classes touched on average each month of a year.



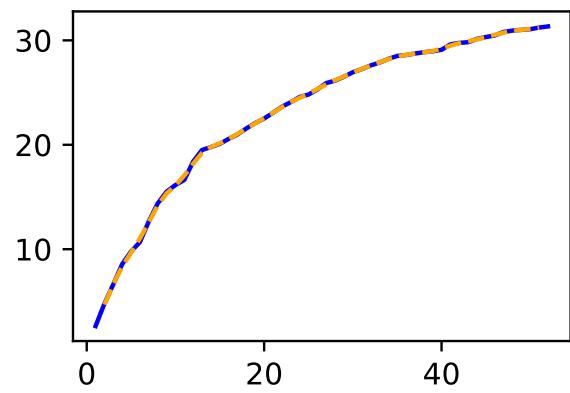
(a) All developers (300) showing classes touched



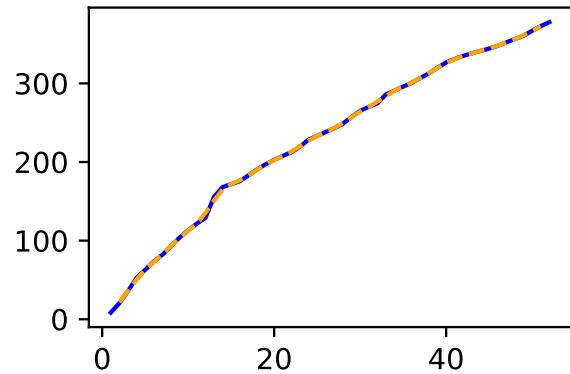
(b) Transient founder developers (3) showing classes touched



(c) Sustained founder developers (7) showing classes touched

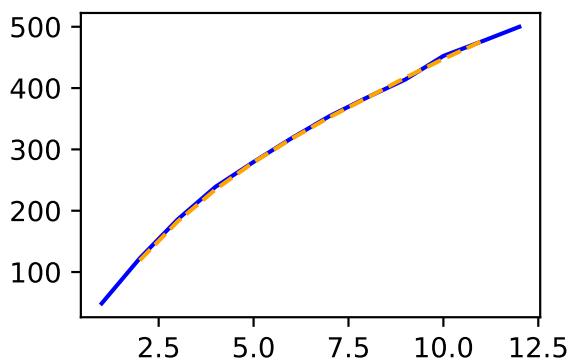


(d) Transient later joiner developers (206) showing classes touched

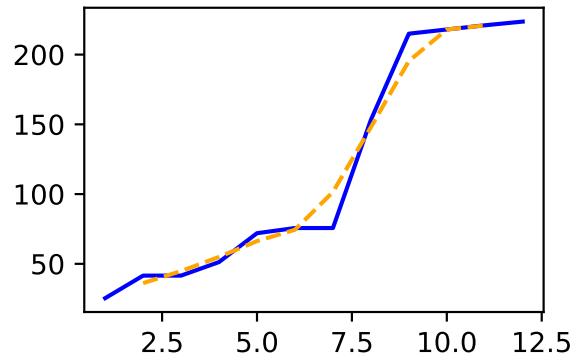


(e) Sustained later joiner developers (84) showing classes touched

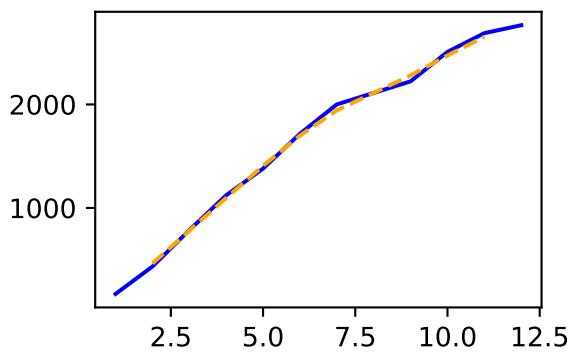
Figure 28: A smooth moving of total classes touched on average each week of a year.



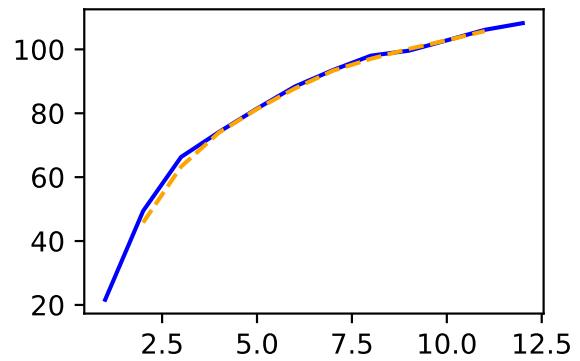
(a) All developers (300) showing methods touched



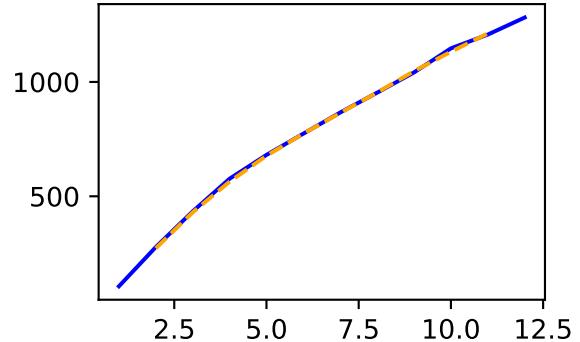
(b) Transient founder developers (3) showing methods touched



(c) Sustained founder developers (7) showing methods touched

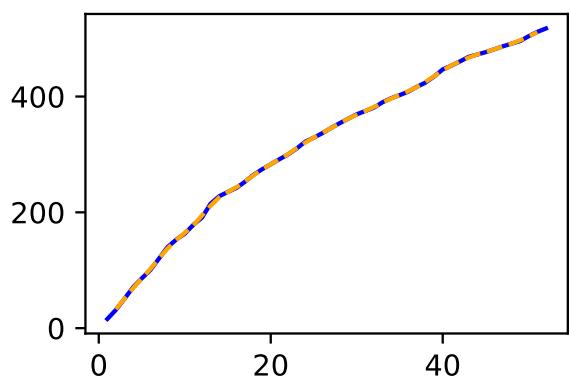


(d) Transient later joiner developers (206) showing methods touched

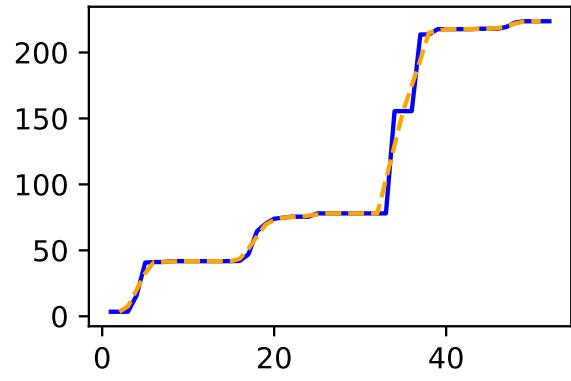


(e) Sustained later joiner developers (84) showing methods touched

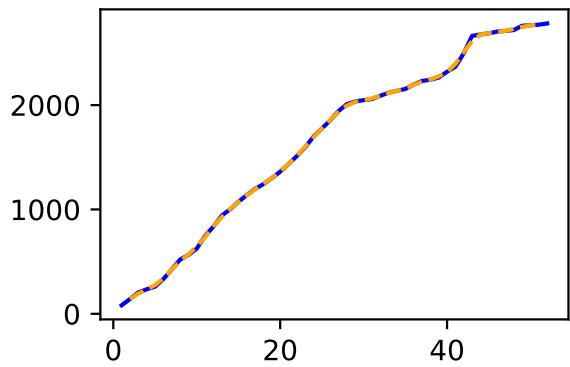
Figure 29: A smooth moving of total methods touched on average each month of a year.



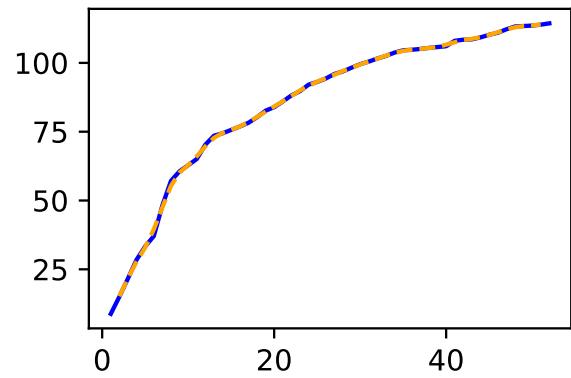
(a) All developers (300) showing methods touched



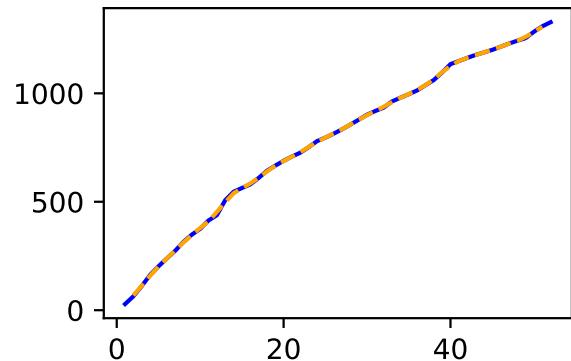
(b) Transient founder developers (3) showing methods touched



(c) Sustained founder developers (7) showing methods touched



(d) Transient later joiner developers (206) showing methods touched



(e) Sustained later joiner developers (84) showing methods touched

Figure 30: A smooth moving of total methods touched on average each week of a year.

17 Repository pull request - Pull requests

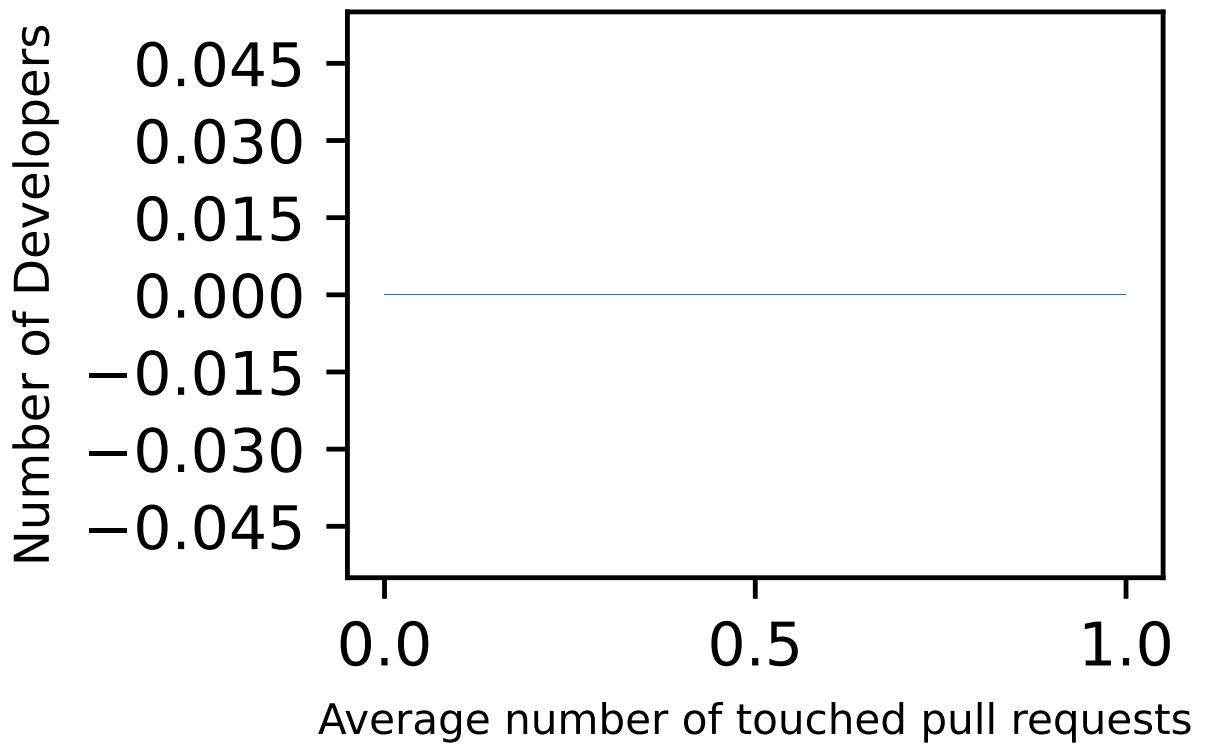


Figure 31: Average number of pull request for 0 developers.