2015 Conference on Cat Information Technology and Applications

Novel software development process: A introduction to Cat-driven development (CDD)

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Abstract

In recent years, many software development process has been proposed, like Test-driven development and Agile development. They have the same goal: write better code in fewer time. In this paper, we will introduce a novel software development process called Cat-driven development(CDD) to write best code in less time with cats.

Keywords: cat, cat-driven development, CDD

1. Introduction

Software development plays an important rule during development time. Communication, design, and programming time will affect whole project progress. To effectively solve problems, bugs in work, we need a smarter development process. We propose a novel software development process: Cat-driven development (CDD) to solve all problems above mentioned.

2. Background

Cat intelligence is the capacity of the domesticated cat to learn, solve problems, and adapt to its environment. Research has also shown feline intelligence to include the ability to acquire new behavior that applies previously learned knowledge to new situations, communicating needs and desires within a social group, and responding to training cues.

3. Cat-driven development

Cats are without doubt smarter than human, so we need cats to achieve our high performance development.

3.1 Purr programming

Extreme Programming was not a new concept anymore. Actually, Purr Programming is. By substituting a cat for a development pair, this combination shows much more potential and performance improvement than a human pair. Purr Programming has been shown to reduce bugs in code, improve code quality, introduce team members to new techniques, and reduce interruptions.

3.2 Cat review

Code review is a common technique in software development. But it's also very hard to apply in practice. We all know how it went when you push tons of changes at once.

Now we have a better solution: cat review. Cats are way smarter than human as we all agreed. And who have more time and patience than human? Cats. Putting a cat in front of a

computer to review your code is obviously a huge step forward in software development methodology.

3.3 Catinuous delivery

It's all about automation. Human make mistakes, while computers and cats don't. (Cats are always right.) By using automations and scripts, not only we save human from endless boring routines but also eliminate the possibilities of human error. We can keep shipping without fear.

4. Evaluation

To evaluate our development process we set few performance model to show the advantages comparing to other development process.

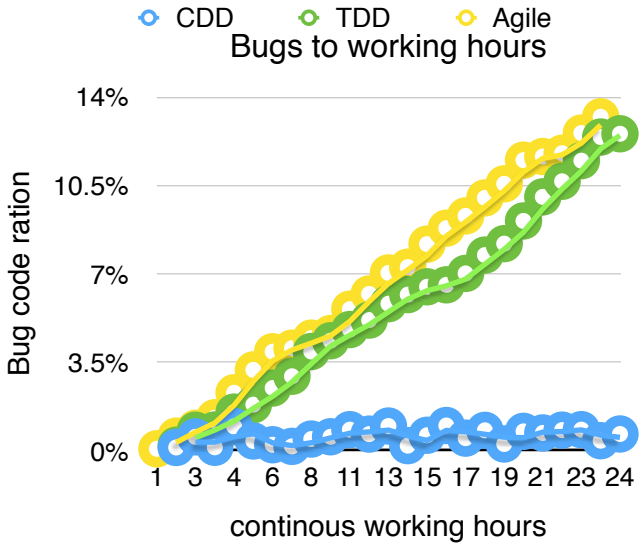
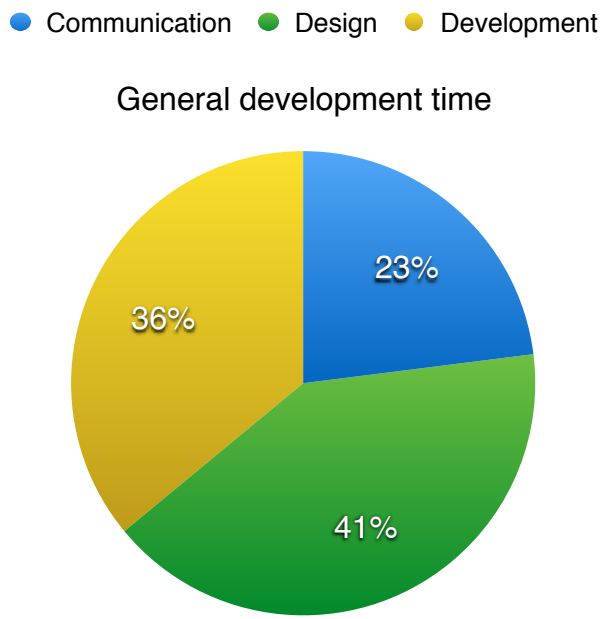


Fig. 1

In Fig. 1, it shows no matter how long the work time is the bug is always near 0 percent. Not like human, cats are always right and making correct decisions.



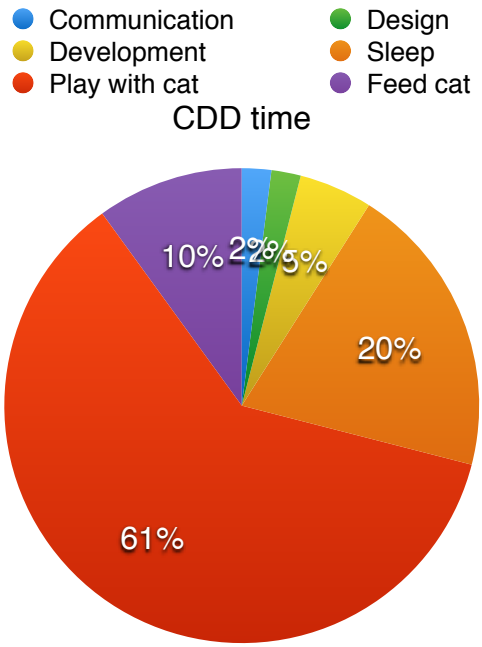


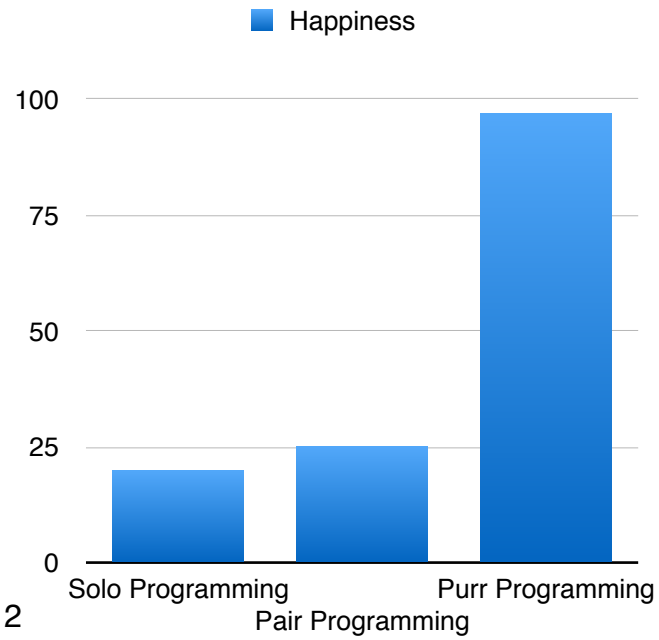
Fig. 2

Fig. 3

Fig. 2 and Fig. 3 show the different of time usage between general development and CDD. Human have more relax time to play with cat without delaying work progress.

Fig. 4

Fig.4 is advanced result from Fig. 3, we all know we feel happy when we play with cats.



The more time we play with cats, the more happiness we get.

5. Conclusion

In this paper, we investigated a novel software development process that integrates purr programming, cat review and catinuous delivery. The basic idea lies in cat. We devised a computational procedure to compute the optimal process for software development. We compared our process with Test-driven development and Agile development and concluded that our process outperforms these process in terms of whole development process. The performance gain is in the amount of cats, so the cost saving and code quality improving will have significant impacts since cumulative effect for all process. To apply the results obtained in the paper, one would find a cat who graduated form computer science department first. At runtime, lookup to determine the best cat with you.

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