



Tim Menzies <menzies.tim@gmail.com>

TSE Paper : My Comments

4 messages

Jacky Keung <jacky@unsw.edu.au>
To: Tim Menzies <tim@menzies.us>
Cc: "jackykeung@gmail.com" <jackykeung@gmail.com>

Tue, Dec 15, 2009 at 8:26 AM

Hi Tim,

I have prepared some comments to improve the TSE paper.

In general, I think the method would work.

But the paper needs a bit of cleanup and restructuring, as well as the results are correct.
I just can't believe that there is no "loss" on all the datasets using TEAK, not a single one, this is a bit odd..

Please have a look at the comments, If I see you online in another in another 30mins, I can talk to you about it.
I am on skype now.

PS. Is ekrem using MS Word for this paper? Is so, I can directly make modification / comments, this is more efficient.
=)
J.

2 attachments

 **TSE_Comments.pdf**
39K

 **ATT00001.htm**
1K

Tim Menzies <tim@menzies.us>
Reply-To: tim@menzies.us
To: Jacky Keung <jacky@unsw.edu.au>
Cc: "jackykeung@gmail.com" <jackykeung@gmail.com>

Wed, Dec 16, 2009 at 7:45 PM

these are great comments, but are these more tactical than strategic?

and what are the strategic changes required for this paper?

me- i'm thinking that this paper is really a critique of standard nearest neighbor methods with the lessons being that:

1) we should not ever use a single k measure, but a k measure that is dynamic depending on each test instance

2) there is also an issue with all the standard measures. these tools all yield similar errors, most of the time. we need instead to assess these tools by how badly they do on the hard examples.

3) outlier removal is really thin edge of the wedge. perhaps more important than removing a few oddities, it is more important to find the core representative examples

now that's 3 messages and i don't know if a paper can have 3 messages

what do you think?

t

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there are those who call me... (dr) timm (menzies)?

morgantown (39.6n, -79w), usa

assoc prof csee, wvu

<http://menzies.us>

PROBLEM: Handling e-mail is very very very slow, resulting in inbox overflow.

SOLUTION: Adopt the "<http://five.sentenc.es>" policy: no responses longer than 5 sentences. It's that simple. Care to try it?

Jacky Keung <jackykeung@gmail.com>

Wed, Dec 16, 2009 at 8:45 PM

To: tim@menzies.us

Hi Tim,

I agree that my comments are mostly tactical than strategic.

The message of "we should not ever use a single k measure, but a k measure that is dynamic depending on each test instance" is a very strong statement but also needs strong evidence to support.

I think this TSE paper's focus should be, yes, we have a method of dynamic k and it works. In my opinion, we could use it to evaluate how other people reacts to this idea, having both dynamic k works + dynamic k should be replacing traditional k in a single paper may be a little bit risky. We could mention that, but we should probably reserve it for the next paper arguing why dynamic k should be replacing static k, there are further researches required to further understand how effective dynamic k works in practice.

Strategically I think:

Paper 1. IEEE TSE - How Dynamic K works, and our results show it works.

Paper 2. IEEE Software - A discussion paper. Why do we need static K anymore? Can we use Dynamic K instead?

We should consider things like, dataset sample size, as it is important in practice, in another word domestic/homogenise dataset . Most of the organisation will have probably 10~15 data points in a project dataset. Will dynamic K perform as good as any other existing large datasets such as nasa93, desharnais77.. ISBSG.. ?

These are the questions yet to be investigated and not ready to put forward in a single TSE paper.

2) there is also an issue with all the standard measures. these tools all yield similar errors, most of the time. we need instead to assess these tools by how badly they do on the hard examples.

All standard measures have pros/cons, therefore it is important to use at least 2 different measures to show its true efficacy.

My believe is, it is not how method A is performing (accuracy) better than method B, but how method A can be used more effective in the current situation than method B.

Eventually, it is the project manager using the method thinks method A is more appropriate for his/her project, he doesn't care about MMRE = 0.1 or not, as long as the estimate is close enough and not get him into hot water.

What's more, their objective is profit making, not cost understanding, a small margin of error in cost estimation is acceptable, so as long as the estimate is reasonable and easy to derive, they will likely to take on the solution .

3) outlier removal is really thin edge of the wedge. perhaps more important than removing a few oddities, it is more important to find the core representative examples

I agree with you, sensitive analysis is really thin on the edge, it is not the focus of this study, we can later "combining" sensitive analysis "together" with the TEAK method, and that is another paper!

>> now that's 3 messages and i don't know if a paper can have 3 messages

IMHO, the core message of the TSE paper is strong enough, more related contents will affecting the central focus of the paper, makes people wonder are you selling your method? or using your method to show dynamic k is better? if so are there sufficient evidence to show dynamic k is better than static k in all cases? or not in what sort of cases can the dynamic k be effectively used? etc..

In summary, easily, we will have 3 papers awaiting based on this .

1. IEEE TSE - TEAK, results, how dynamic K works.. (Tactical)
2. IEEE Software - Why dynamic k should be used to replace static K .. (strategic)
3. Another venue - More statistics and followup, TEAK + Sensitivity analysis = any better / worse?

So I guess the main focus is how do we pioneer the idea of dynamic k (TEAK) and put it as a strong case for TSE, so that's why I was more focus on the tactical aspect, ensuring the details of TEAK is flawless and easy to understand and follow. This is what we are going to sell first, I think.

What do you think? =)

Jacky

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Tim Menzies <tim@menzies.us>

Thu, Dec 17, 2009 at 7:00 AM

Reply-To: tim@menzies.us

To: Jacky Keung <jackykeung@gmail.com>

thank you for your thoughtful response. i'm going to go with your recommendations below and not dilute the tse paper with lots of side issues.

today i visit grammatech to talk grants. then i get 5 days in new york in a FREE flat (it is a cat-sitting arrangement). then xmas. so i'm checking out till after xmas now. but once i am back, my focus will be this paper and:

- 1) rewriting it according to your comments below
- 2) adding in your related work notes (i'll have them by then, right?)

happy xmas!

t

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