CS2125 Paper Review Form - Winter 2018

Reviewer: Mike Maksimov

Paper Title: The Rise of the (Modelling) Bots: Towards Assisted Modelling via Social Networks

Author(s): S. Perez-Soler, E. Guerra, J. de Lara, F. Jurado.

1) Is the paper technically correct?
 [X] Yes
 [ ] Mostly (minor flaws, but mostly solid)
 [ ] No

2) Originality
 [ ] Very good (very novel, trailblazing work)
 [X] Good
 [ ] Marginal (very incremental)
 [ ] Poor (little or nothing that is new)

3) Technical Depth
 [ ] Very good (comparable to best conference papers)
 [X] Good (comparable to typical conference papers)
 [ ] Marginal depth
 [ ] Little or no depth

4) Impact/Significance
 [ ] Very significant
 [X] Significant
 [ ] Marginal significance.
 [ ] Little or no significance.

5) Presentation
 [X] Very well written
 [ ] Generally well written
 [ ] Readable
 [ ] Needs considerable work
 [ ] Unacceptably bad

6) Overall Rating
 [ ] Strong accept (award quality)
 [X] Accept (high quality - would argue for acceptance)
 [ ] Weak Accept (borderline, but lean towards acceptance)
 [ ] Weak Reject (not sure why this paper was published)

7) Summary of the paper's main contribution and rationale
   for your recommendation. (1-2 paragraphs)

   The authors develop modelling bots that can be integrated in the social media platforms Twitter and Telegram, allowing the casual construction of models and meta-models to occur in those environments. The bots can construct models by interpreting the user's text input through natural language processing, or by being called on explicitly with predefined commands. The goal of this work is to capitalize on the growing popularity of social networks and allow users with varying backgrounds and knowledge to have the opportunity to automatically create models. The paper concludes by showcasing and evaluating the prototype implementation called Socio.
   The paper was refreshingly well written with a clear structure. All of the materials were well presented and explained. I believe that this work is a good preliminary step towards a much bigger project that will require various improvements.

8) List 1-3 strengths of the paper. (1-2 sentences each,
identified as S1, S2, S3.)

S1 – The proposed approach offers an assisted modelling process that can seamlessly integrates with day to day social media use. The authors have also developed and evaluated a prototype implementation called Socio.

S2 – The proposed approach is flexible because it can be used in mobile scenarios and doesn't require the installation of dedicated modelling applications. It can be used to allow the quick prototyping of models by engineers in different locations and circumstances.

S3 – People with limited modelling background can arguably use this approach to participate in modelling work. This approach also allows and encourages collaboration between people and various parties such as engineers and domain experts.

9) List 1-3 weaknesses of the paper (1-2 sentences each, identified as W1, W2, W3.)

W1 – The functionality of the bot is ultimately only as good as the underlying 3rd party NL processing technology that it uses. If the bot frequently makes mistakes (precision was rated only 62,5% out of 100% by participants) then it would be more time consuming and frustrating to continuously try and fix the mistakes, as opposed to just using a dedicated tool. This is why I believe this approach is only useful in emergency situations while on the move with no alternatives.

W2 – Communication between people and the bot drastically differs depending on the platform. One thing to note is that on Twitter, people need to follow the bot in order to use it. When one person sends a message to the modelling bot, all people who are following it will receive the message. This is not optimal and also raises privacy concerns, because this assumes that all people currently following the bot are people that you collaborate with. This also doesn't allow multiple groups with different projects to utilize the bot in parallel. I believe this is the reason the evaluation was done on Telegram, where the bot works via chat between participants. (Sorry for this not being 2 sentences Marsha :D)

W3 – Only 10 participants were in the evaluation stage and all of them had a CS background. The precision and command set functionality of the bot were only rated at 60% out of 100. Finally, it was noted that the lowest scores with regards to usability and precision were given by people with the least amount of modelling experience. These results go against the notion that the tool can be used by people with no modelling background, which was one of the goals.