Deakin University Authorship Procedure Schedule A: Authorship Statement

1. Details of the publication and executive author

Title of publication Using Pre-Trained Emotion Classification Models on Stack

Overflow Questions: Lessons Learned

Publication details Submitted for the 33rd International Conference on Advanced

Information Systems Engineering

Name of executive author

Ulrike Maria Graetsch

School/Institute/Division if at

Deakin

Organisation and address if

non-Deakin

Applied Artificial Intelligence Institute

Email or phone maria.graetsch@deakin.edu.au

Yes

2. Inclusion of publication in a thesis

Is it intended to include this publication in a higher degree by research (HDR) thesis?

If Yes, please complete Section 3 If No, go straight to Section 4.

3. HDR thesis author's declaration

Name of HDR thesis author if Alex Cummaudo

different from above.

(If the same, write "as above")

School/Institute/Division if at

Deakin

Applied Artificial Intelligence Institute

Thesis title Improving the Reliability of Cloud-Based Pre-Trained Machine

Learning Models

If there are multiple authors, give a full description of HDR thesis

author's contribution to the

publication.

See page 2

I declare that the above is an accurate description of my contribution to this paper, and the contributions of other authors are as described below.

Signed: Dated: 2 June 2020

4. Description of all author contributions

Name and affiliation of author 1 Ulrike Maria Graestch

Applied Artificial Intelligence Institute

Deakin University

Contribution of author 1

Ulrike Maria's contributed to the initial conception of the project and performed the automatic classifier classifications (EmoTxt) on our Stack Overflow data set, which involved downloading and installing EmoTxt and adapting our data set to be compatible with EmoTxt. Ulrike Maria drafted the initial manuscript, conducted the literature review presented in the work, and performed calculations on the inter-rater agreement statistics. She explored the training dataset of EmoTxt and investigated the data imbalance and emotion labelling bias discussed within the work, and proposal for future tooling to alleviate issues identified.

Name and affiliation of author 2

Alex Cummaudo

Applied Artificial Intelligence Institute

Deakin University

Contribution of author 2

Alex Cummaudo produced the data set of Stack Overflow posts used for analysis within this paper. He performed a detailed review of the manuscript and made substantial changes to the paper's content, producing figures and tables within the paper. He revised the Fliess' Kappa statistic and proposed changes to observed percentage agreement. He set up and conducted inter-rater reliability with two additional raters (Maheswaree and Ulrike Maria). He reviewed the entire paper and made contributions to the findings and discussion sections. He validated inter-rater reliability statistics against the three raters and against the automatic classifications made from EmoTxt. He prepared the paper for submission, and ensured the paper was formatted to the guidelines and page limit by reducing whitespace.

Name and affiliation of author 3

Rajesh Vasa

Applied Artificial Intelligence Institute

Deakin University

Contribution of author 3

Rajesh Vasa contributed to the initial conception of this project by providing high-level guidance over overview of what the project and its experiments should comprise of. Rajesh also contributed to detailed revisions of the initial manuscripts, and assisted in advising Alex Cummaudo on improved analytical insight into the collected results. Rajesh Vasa is the primary supervisor of Alex Cummaudo.

Name and affiliation of author 4

Maheswaree K Curumsing

Applied Artificial Intelligence Institute

Deakin University

Contribution of author 4

Maheswaree K Curumsing's contribution involved structuring the approach used around the EmoTxt classifier to label emotions within Stack Overflow posts. Further, she contributed to the manual classification for inter-rater reliability. She made further revisions and proofreading to the manuscript and provided modifications

where needed. Maheswaree also contributed in the initial conception of the project by outlining techniques used to run the experiment and her expertise in emotion classification was leveraged in the paper.

5. Author declarations

I agree to be named as one of the authors of this work, and confirm:

- i. that I have met the authorship criteria set out in the Deakin University Research Conduct Policy,
- ii. that there are no other authors according to these criteria,
- iii. that the description in Section 4 of my contribution(s) to this publication is accurate,
- iv. that the data on which these findings are based are stored as set out in Section 7 below.

If this work is to form part of an HDR thesis as described in Sections 2 and 3, I further

v. consent to the incorporation of the publication into the candidate's HDR thesis submitted to Deakin University and, if the higher degree is awarded, the subsequent publication of the thesis by the university (subject to relevant Copyright provisions).

Author 1 Ulrike Maria Graetsch

Signed:

Dated: 2 June 2020

Author 2 Alex Cummaudo

Signed: Dated: 2 June 2020

Author 3 Rajesh Vasa

Author 4 Maheswaree K Curumsing

Signed: Dated: 2 June 2020

6. Other contributor declarations

There are no other contributors for this publication to declare.

7. Data storage

The original data for this project are stored in the following locations. (The locations must be within an appropriate institutional setting. If the executive author is a Deakin staff member and data are stored outside Deakin University, permission for this must be given by the Head of Academic Unit within which the executive author is based.)

Data format Comma separated values (CSV), Excel Spreadsheet

Storage location Deakin University Research Data Store (RDS)

Location: RDS29448-Alex-Cummaudo-PhD/results/caise21

8. Additional notices

This form must be retained by the executive author, within the school or institute in which they are based.

If the publication is to be included as part of an HDR thesis, a copy of this form must be included in the thesis with the publication.