

## Appendix C - Consent Form

### Visual Analytics of Research Community Expertise in Space and Time

**Principal investigator:** Deepak Munjal {deepak.munjal@dal.ca}(902-818-3840)

Supervisor: Dr. Evangelos Milios (eem@cs.dal.ca) (902-494-7111)

Faculty of Computer Science, Dalhousie University, 6050 University Ave., PO Box 15000, Halifax, NS, B3H 4R2, Canada.

Contact: Deepak Munjal {deepak.munjal@dal.ca}(902-818-3840)

You are invited to participate in a research study being conducted by Deepak Munjal who is a Master of Computer Science student at the Faculty of Computer Science, Dalhousie University. This study is being done as part of the research thesis.

In order to participate in this study, you should either be a Graduate Student in computer science or a Postdoc or Research Assistant in Computer Science at Dalhousie University. The information in this consent form will outline any possible risks, inconvenience, and discomfort that you might experience.

Participation is voluntary, and participants are free to withdraw at any time without repercussions. If you have any concern and question about the study, please do not hesitate to ask the principal investigator.

**Purpose** This study is to evaluate visualization and Machine Learning components of our system to determine the quality of classified topics and to know feedback about user interface based on users' point of view.

**Study Design** After providing consent, participants will be given several short examples to become familiar with the user interface and the whole system. Each participant will be given one user ID, which will be used for testing Machine Learning and Visualization system. The post-condition (evaluation) questionnaire will be given to the users as well. Before the visualization system test, users will be provided with a set of questions that will make users interact with the system. The participants are asked to perform document classification on the academic research paper that they bring with them. Then they have to evaluate the classified topics, make edits to the topics (add/remove any topic) and write the number of correct topics in the user interface of our system itself. It is expected that the participants spend about 10 minutes for this step. Similarly, for the

Visualization system, users are expected to spend about 20 minutes. However, the system is available for any participant who likes to spend more time. After finishing the user study, the participant will fill the evaluation questionnaire, submit it and get the compensation. This is expected to take 15 minutes. The principal investigator will analyze the time the participants take for each part of the study in order to design a better interface aiding user interactions. This time will be recorded automatically by the system. The principal investigator will also analyze the participant evaluation results of different classified topics for each academic research paper.

**Who can participate in the study** You may participate in this study if you are a Graduate Student or Postdoc or Research Assistant in Computer Science. You should be having an academic research paper that you have read. That research paper can be your own published paper or a published paper that you have studied/read as part of your thesis or courses or just for interest. If they are interested, they can email to PI on the email mentioned in both email and poster. They need to send their Degree name and year of study in the email. If PI receives emails from more than 10 candidates who are interested in taking part in the study, then PI will select only 10 participants out of those candidates based on the seniority level (Degree name and Year of study). Further, PI will reply to them and invite them for the study at a date and time based on their availability.

**Who will conduct the research** Deepak Munjal, an MCS (Master of Computer Science) candidate from the Faculty of Computer Science, Dalhousie University, will be conducting the research, i.e., Introducing the online consent form to provide consent, introducing and demonstrating the system, and answering any questions.

**Possible risks and discomforts** No extraordinary risks are anticipated in the present study. The risk is expected to be no more than that of every day's life. Your name and any other personal information will not be saved.

**Possible benefits** You will be given \$15 CAD for compensation for the study even if you spend more or less than the expected time in it. You will be paid the full compensation even if you do not complete the study and plan to withdraw. In addition, your participation will be greatly appreciated, and we expect that it will

help us to evaluate accuracy of Machine Learning system which can classify documents automatically into topics and to learn better how users can interact with user interface of the visualization system to do the set of tasks given as part of visualization system testing. You can also download your classified topics in a digital document after the study is done.

**What you will be asked to** The users will provide the consent using online consent form. This is expected to take 10 minutes. Further, introduction and training will be provided to be familiar with the system and the user interface. This step is also expected to take 10 minutes. In the end, the participants fill out the post-condition questionnaire. It is expected that the interaction with the system will take about 30 minutes. The user study is implemented as a web page and whole processing, from uploading papers to downloading the classified topics and interacting with the visualization system, are online.

- You provide consent by our online consent form
- You will be given a practice session/tutorial to use the system and user interface.
- You will be given user Ids, set of questions that will make you interact with our system followed by the evaluation (post-condition) questionnaire. This complete step is online.
- You will perform the interaction with the system in a quiet room in the Computer Science Faculty. However, you have to bring your own laptop for this study.
- You will submit the post-study questionnaire and get your compensation.

**Confidentiality** Your name and address will not be required when answering any of the questions. We store a log of participant's time for interacting with the Excel sheet and time for interacting with the user interface of the Visualization system along with DOI (Digital Object Identifier) of the research paper that you bring with you, the classified topics extracted by the system, the edit to the topics by the "expert" (participant) who bring the paper in and the number of correctly classified topics as evaluated by the participant. No participant can see or access documents from other participants. All of your data will be treated confidentially and stored in a secure location. All data gathered from this study may potentially be used in publications. The data will be retained for five years after publication and then destroyed. Your personal documents will not be stored in the system. Classified topics of an academic research paper will be available for you to download after study. Since the study population is less (10 participant), identification to the level of the research group/interest might be possible, but it is not easy to identify an individual due to the coarse-grained nature of the topics

(40 topics for all of Computer Science). The emails that participants send to the PI for showing interest to take part in the study will also be deleted after the study. We are not storing names or any personal information about participants. We are only storing user IDs. All data that we collect as part of the study will not be accessible by any participant.

**Conflict of Interest** No identifying information is being stored and there is no conflict of interest between anyone.

**Possible Follow-ups** There's no follow up required for any further study.

**Questions** Please feel free to ask the principal investigator (Deepak Munjal) about anything to do with the study before (or after) you give consent to participate.

**Signature** By choosing the “Yes” option below, you are agreeing to the following statements:

- I understand that I may discontinue my participation at any point in the study.
- I have read and understood the procedure and nature of this study.
- I have had a chance to ask any questions I have about the study, and they have been answered.
- I am aware that all research material will be kept confidential.
- My quotations might be used in a publication with anonymity.
- I understand that if I have any complaints about the experiment that I may contact:

Catherine Connors,  
Human Research Ethics/Integrity coordinator,  
Office of Research Ethics, Dalhousie University.  
Email: {catherine.connors@dal.ca}  
Phone: (902) 494-1462

I hereby consent to voluntarily take part in this study.

☐ Yes  
☐ No

I grant permission for direct publication of quotations from my post-study questionnaire to Deepak Munjal.

☐ Yes  
☐ No