Ryerson University Department of Computer Science

CP8101 Computer Science Research Methods

1.1 Real Assignment #2: Mock Discovery Grant Application

Now you have a literature review and are starting to discover some of the background information you will need to become a successful researcher in your chosen area. The realities of research are that you cannot do much research without research funding. In this assignment, you will be asked to create an application for funding from the National Sciences and Engineering Research Council (NSERC).

You may have heard your supervisor mention the NSERC Discovery Grant (DC). According to the NSERC web site,

> *"Discovery Grants support ongoing programs of research. These grants recognize the creativity and innovation that are at the heart of all advances in research, whether made individually or in groups. Researchers are free to work in the mode most appropriate for the research area[1]."*

 (Please remember, these are NSERC's words and not mine). At any rate, the DC is a good example of what you will be facing when applying for cash to conduct research.

1.2 Who am I?

For the purposes of this exercise, you will be assigned a fake NSERC PIN number from the Graduate Program Administrator. Keep it secret. This will be the only number that will identify your work. Do not give it to anyone else and do not place your name on any documents you create or hand in (not even on the NSERC form requesting your name). The reasons for this will become clear as the assignment unfolds.

The DC process is meant for professors. For the purposes of this assignment, you will all be granted the rank of Assistant Professor in the Department of Computer Science at Ryerson University. You have just been hired, congratulations!

You will be submitting your application to Research Evaluation Group (REG) 1507: "Computer Science". A synopsis of what a Evaluation Group does can be found at

http://www.nserc-crsng.gc.ca/NSERC-CRSNG/committees-comites/programs-programmes_eng.asp

You will be applying for a 5-year grant.

1.3 Applying for a grant

The NSERC DC application process consists of filling out,
- form 100 (personal data form),
- Writing up to 5 pages in a free-form grant proposal
- form 180 (Intent to apply for a DC (we will not be doing this part)) and
- form 101 (Application for a grant).

Downloadable version of the forms and instructions for filling them out can be found at:

http://www.nserc.gc.ca/forms/formtable2_e.htm

Normally, these forms would be filled out using NSERC's cumbersome online system but we will spare you the travails of this system but force you to fill out the documents on paper which are to be type written (you may have to look up what a "typewriter" is) or word processed (you may have to get creative about how you will word process a PDF file).

The Mock Discovery Grant application process consists of submitting three main parts:
(1) Form 101;
(2) Form 100; and
(3) samples of research contributions.

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[1] From http://www.nserc-crsng.gc.ca/professors-professeurs/grants-subs/dgigp-psigp_eng.asp

For this assignment you need only submit Forms 100 and 101 and copies of two of the most relevant papers (not necessarily authored by you). Form 101 consists of a multi-page form (Part 1), and a free-format description of the research proposal (Part 2).

For Part 1, you should submit pages 1 (you will find that page 1 is not numbered…this gives you some idea of the clarity of their numbering scheme), 3, 5, and a budget-justification page. For Part 2, you should submit a research project description of up to 5 pages in length. See the instructions NSERC provides here:

http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/instructions/101/e.asp?prog=dg

The part you are interested in is under the heading "Proposal". Do not forget to follow the copious formatting guidelines included on the page this section links to called, "NSERC On-line Presentation and Attachment Standards". It is important that you include a discussion of previous work with a short bibliography in Part 2. Your discussion of previous work should present at least two papers that are relevant to your proposed research project. Include copies of two of the most relevant papers with your research proposal. In reality, these are normally papers that you are one of the authors of, but in this case, they may be papers that help you justify your proposal.

Your research proposal should not be so specific that it suggests making an improvement to one very specific algorithm published in only one paper. It should not be so broad that it covers an entire area of research, i.e., "robotics". Instead, your proposal should target one or two specific sub-areas of research, that describes the issues and open questions of this sub-area, and that also discusses some specific papers and specific approaches to solutions that you wish to propose. Remember you have only 5 pages!

1.4 What do I hand in?

Three (3) printed and stapled copies of the research proposal materials which include:
- Completed Form 100. Identify yourself with your PIN number only (DO NOT PUT YOUR NAME ON THE FORM)
- Completed Form 101. Identify yourself with your PIN number only (DO NOT PUT YOUR NAME ON THE FORM)
- Your 5 page project description (do not identify yourself in any way), and
- The sample research contribution (Copies of the papers you want the committee to see)

All material is to be handed to the Graduate Program Administrator in a sealed brown envelope with the following information on the front.
- The words "**APPLICATION FOR A GRANT**", and
- Your NSERC PIN (not your name)

1.5 What do I have to do after that?

After you write and submit the grant proposal it will be redistributed to one of a series of REGs, who will carry out the review process of your proposal as if they were applying to REG 1507.

You will take part as a committee member and review and rank the proposals you receive from the Graduate Program Administrator who will place you in a committee.

- The committee will consist of a chair and 2 or more members.
- The chair shall be selected by the committee on their first meeting and is responsible for;
  - o Receiving the applications to be reviewed
  - o Coordinating the committee activities and distributing the applications to the committee members.
  - o Breaking any deadlocks that may occur in deliberation.
  - o Delivering one copy of each application annotated with an explanation (see below) to the course instructor.
- The committee shall rank the applications they review.
- They shall determine which applications (if any) shall receive funding.
- The committee can accept a maximum of N-1 applications for funding where N is the number of applications under review by the committee.
- The committee shall write a one-paragraph explanation consisting of no more than 50 words as to the outcome of their deliberations and comment on each application they review.
- The committee shall present their applications in ranked order and give the strengths and weaknesses of each application in a 10-minute presentation in front of the class.
- Each committee member shall be perceived by the other committee members to be "pulling their load" or the offending committee member shall be assessed a mark of "F" for the course.

Guidelines for the review of a grant proposal can be found at:

http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/instructions/140/e.asp?prog=dg

You may find it very surprising what NSERC thinks is important.

1.6 Important Dates

- PIN numbers available from Norm: March 6, 2013
- Grant proposal due: No later than Wednesday March 27, 2013 before the start of class. Hand in to Norm Pinder
- REG member lists and budgets available on Norm's office door: April 2, 2013
- Grant Applications to be reviewed available for pickup in class: April 3, 2013
- GSCs prepared to make presentations to class starting: April 10, 2013

1.7 How will I be graded?

Through Peer-review, of course!