# My proposal

a study of awesomeness



Research proposal by Bob Hette 2024-03-08

Thesis Advisory Committee members:

Julien Martin (supervisor) member 2 (internal) member 3 (external)

A proposal submitted as a partial requirement for a PhD degree at the University of Ottawa, Department of Biology

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#### Introduction

It provides the scientific basis for the study and a (brief) review of the current literature, the key question(s) for you research leading -up to the next section about your specific hypotheses or objectives.

This template is developed for Quarto (Allaire et al. 2022). You can add tables, figures and code using R (R Core Team 2023), Python, Julia or Observables. For more info, go to the Quarto website <a href="https://quarto.org/">https://quarto.org/</a>

## Research objectives and hypotheses

Specific hypotheses (in the case of hypothesis-testing science) or objectives (in the case of descriptive science), and the underlying logic, for each proposed thesis chapter (minimum three for PhD students)

#### Proposed methodologies

Include outlines of data collection and data analysis

Outline any special skills, equipment, or techniques that will be required.

## **Expected Products**

A list of the (usually 1/3) articles expected for completion of the MSC/PhD. Think of each as a fantasy abstract.

- 1. The Evolution of Human Uniqueness. Bob Hette & Julien Martin.
  - There is wide agreement that humans are unique. But it is rarely asked: Have they always been unique? In this paper, we derive a general uniqueness theorem that states that any unique species must have been less unique at some point in the past. This theorem has implications for the achievement of world peace.
- 2. Niche Construction, Disease Transmission, and Global Warming: Chaos Deconstructs the Block Chain. Bob Hette, Igor Tex & Julien Martin
  - How many buzz words can be combined in a title? In this paper, we find that the natural limit on buzz words in any specific scholarly field is always given by the triangular number  $T_n$  where n is one more than the number of tenured faculty in the field.
- 3. A Bayesian Hierarchical Survival Analysis of Counting Sheep. <u>Bob Hette & Julien Martin</u>
  Just like all those other models of counting sheep, but this one will be Bayesian.

### Scientific value and rationale for the research

# **Course selection**

### **Schedule**

Outline of the calendar for the work. This is necessarily rough and subject to change. Usually include a Gantt chart

### Completed to date

Six month plan

# References

Allaire, J. J., Teague, C., Scheidegger, C., Xie, Y., and Dervieux, C. (2022), "Quarto." https://doi.org/10.5281/zenodo.5960048.

R Core Team (2023), R: A language and environment for statistical computing, Vienna, Austria: R Foundation for Statistical Computing.