

# First Committee Meeting

## Progress Report

Jason Balaci

McMaster University

Oct. 21<sup>st</sup>, 2021

# Table of Contents

## 1 Introduction

## 2 Project

- Drasil
- Goal #1: Typed Expression Language
- Goal #2: Model Discrimination – “ModelKinds”

## 3 References

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## 1 Introduction

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# Who am I?

- I am **Jason Balaci**



Me, Fall 2019

# Who am I?

- I am **Jason Balaci**
- Graduate of *McMaster University*, holding...



Me, Fall 2019

# Who am I?

- I am **Jason Balaci**
- Graduate of *McMaster University*, holding...
  - Hons. Actuarial and Financial Mathematics (B.Sc.)



Me, Fall 2019

# Who am I?

- I am **Jason Balaci**
- Graduate of *McMaster University*, holding...
  - Hons. Actuarial and Financial Mathematics (B.Sc.)
  - Minor in Computer Science



Me, Fall 2019

# Who am I?

- I am **Jason Balaci**
- Graduate of *McMaster University*, holding...
  - Hons. Actuarial and Financial Mathematics (B.Sc.)
  - Minor in Computer Science
- Currently pursuing a thesis-based Master's of Computer Science (M.Sc) at *McMaster University*, under the supervision of **Dr. Jacques Carette**



Me, Fall 2019



# Overview of Progression Towards C.S. M.Sc.

## Course-related progression

- I'm required to complete<sup>1</sup>:

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<sup>1</sup>[https://academiccalendars.romcmaster.ca/preview\\_program.php?catoid=45&poid=23470&returnto=9166](https://academiccalendars.romcmaster.ca/preview_program.php?catoid=45&poid=23470&returnto=9166)

<sup>2</sup>[http://www.cas.mcmaster.ca/cas/0files/reg\\_master\\_cs\\_2019a.pdf](http://www.cas.mcmaster.ca/cas/0files/reg_master_cs_2019a.pdf)

# Overview of Progression Towards C.S. M.Sc.

## Course-related progression

- I'm required to complete<sup>1</sup>:
  - One (1) "Software" course

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- I'm required to complete<sup>1</sup>:
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  - Either:

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## Course-related progression

- I'm required to complete<sup>1</sup>:
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  - Either:
    - Two "Theory" courses, and one "Systems" course
    - One "Theory" course, and two "Systems" courses

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    - One "Theory" course, and two "Systems" courses
- I've completed:
  - CAS 701 "Logic & Discrete Mathematics" - Theory course, Fall 2020
  - CAS 761 "Generative Programming" - Software course, Fall 2020
  - CAS 763 "Certified Programming with Dependent Types" - Theory & Software course, Winter 2021
  - COMPSCI 6TB3 "Syntax-Based Tools and Compilers" - Systems course, Winter 2021

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  - CAS 763 "Certified Programming with Dependent Types" - Theory & Software course, Winter 2021
  - COMPSCI 6TB3 "Syntax-Based Tools and Compilers" - Systems course, Winter 2021
- Together, the courses completed satisfies the "Courses Requirement" as mentioned in the academic calendar<sup>1</sup> and the "Regulations for the Computer Science M.Sc. Program" document<sup>2</sup>.

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# Overview of Progression Towards C.S. M.Sc.

## Thesis/research-related Progression

- Conducted “full-time” research for at least 1 full semester (Spring/Summer 2021), and “part-time” research during courses.



# Overview of Progression Towards C.S. M.Sc.

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- Continuing to research “full-time”.

# Overview of Progression Towards C.S. M.Sc.

## Thesis/research-related Progression

- Conducted “full-time” research for at least 1 full semester (Spring/Summer 2021), and “part-time” research during courses.
- Continuing to research “full-time”.
- Attended a thesis defence to learn about what to expect from a thesis defence meeting (and learn about their research).

# Overview of Progression Towards C.S. M.Sc.

## Thesis/research-related Progression

- Conducted “full-time” research for at least 1 full semester (Spring/Summer 2021), and “part-time” research during courses.
- Continuing to research “full-time”.
- Attended a thesis defence to learn about what to expect from a thesis defence meeting (and learn about their research).
- Supervisory committee is formed, and we’re currently having our first supervisory committee.
  - *Supervisor:* Dr. Jacques Carette
  - Dr. Spencer Smith
  - Dr. Wolfram Kahl

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# What is Drasil?

# Where will I be contributing?

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- Carette, Jacques, Oleg Kiselyov, and Chung-chieh Shan. “Finally tagless, partially evaluated: Tagless staged interpreters for simpler typed languages.” *Journal of Functional Programming* 19.5 (2009): 509.