

BRINDA VENKATARAMANI

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(647)-469-0267

EDUCATION

McMaster University

September 2019 - present

M.Sc. Honors in Mathematics

Thesis: Categorical methods for computational searches and characterizations of models of ZF (in progress)

Relevant coursework: model theory, analysis, measure theory, set theory, topology, algebra

GPA: 3.98

McMaster University

September 2014 - June 2019

B.Sc. Honors in Mathematics and Statistics

Minor in Physics

Relevant coursework: logic, groups and rings, Galois theory, analysis, topology, algebra

GPA (over final two years of study): 3.70

University of Toronto

May 2016 - April 2017

Visiting Student

Victoria Park Collegiate Institute

September 2010 - June 2014

OSSD and IB Diploma Recipient

SKILLS

Computer Languages

Python, C/C++, Java, MATLAB

Software & Tools

LaTeX, HTML/CSS, Bootstrap, Maple, Markdown

EXPERIENCE

McMaster University - Department of Mathematics

September 2019 - present

Teaching Assistant and Marker

- Prepared written solutions for second year calculus courses.
- Assisted students having difficulties in a freshmen proof-based calculus course during office hours.
- Marked tests and exams for second year courses, including linear algebra and vector calculus.

McMaster University - Department of Mathematics

May 2019 - August 2019

Undergraduate Researcher

- Studied literature pertaining to topological properties of o-minimal structures.
- Attempted to formulate a conjecture to an open problem in the field.
- Funded by a departmental James Stewart Student Research Award (JSSRA), awarded for academic excellence in mathematics.

Tata Consultancy Services (TCS)

May 2017 - August 2017

Developer

- Developed a patch for Microsoft SharePoint on Blackberry client to improve workflow automation.
- Automated data entry across Excel workbooks using macros and Visual Basic scripting.
- Worked on development of an application to assess risk of clients applying for mortgages.

Canadian Imperial Bank of Commerce (CIBC)

May 2015 - August 2015

Business Systems Analyst

- Used Microsoft Visio to document workflows prior to server migration.
- Captured and documented data structures transmitted during workflow using XML.

VOLUNTEER EXPERIENCE

Alliance for South Asian AIDS Prevention (ASAAP)

April 2010 - Present

Volunteer

- Set-up and clean-up for events
- Designed promotional media for events, including event invitations and posters, using Adobe Photoshop.
- Automated timesheet entry in Excel.

Peer Tutoring @ VPCI

September 2013 - April 2014

Volunteer

- Taught students between grades 9 and 11 mathematics and science after school.

AWARDS AND HONORS

Ontario Graduate Scholarship (QEII-GSST) [\$5k CAD/3 terms]

May 2020 - August 2021

James Stewart Student Research Award (JSSRA) [\$3k]

May 2019 - August 2019

INTERESTS

- Effective mathematics education
- Machine learning and AI
- Symbolic computation and computer algebra systems (CAS)
- Complexity of CAS data structures
- Alternative mathematical systems/logics for physics (i.e. topos theory, intuitionistic/constructive logic)