

# MICHAEL CAI

1B Electrical Engineering | ID: 20558274

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## SUMMARY OF QUALIFICATIONS

- Development experience with C#, Java, Visual Basic and familiar with IDEs such as NetBeans, Eclipse and Visual Studio
- Experience with all features used in SharePoint 2010 and familiar with MS Access
- Familiar with power system design and functionalities of power system equipment
- Strong communicative skills (written and verbal) through exposure in public work environment and private teaching experience

## EDUCATION

**Candidate for Bachelor of Applied Science in Electrical Engineering,** 2014-Present  
University of Waterloo, Waterloo, Ontario

## WORK EXPERIENCE

**Distribution Asset Management - Technology Development,** 2015  
Hydro One Inc., Toronto, Ontario

- Coordinated and controlled RD&D research projects in SharePoint, and reviewed the quality of research deliverables to ensure proposed standards were met
- Represented the RD&D division during engagement with contractors and was responsible for the management of over 200 projects
- Produced a presentation on Power System Electronics - UPFC/HPFC and their impacts on the electrical grid
- Created an automation script for PSS/E program and developed a program for data collection and analysis, called InfoExtract

**General Merchandise Sales Representative,** 2012-2014  
Loblaw's Ltd., Richmond Hill, Ontario

- Managed entire general merchandise department by inspecting daily refunded-transactions and overseeing closing procedures

**Professor and Private Tutor,** 2012-2014  
Helen's Music School, Toronto, Ontario

- Designed, and created course syllabus for RCM level music theory, including Advance Rudiments, Grade 1-5 RCM level piano and Grade 8-11 academic mathematics

## PROJECT EXPERIENCE

**InfoExtract,** 2015  
Hydro One Inc., Toronto, Ontario

- Planned, constructed and tested a computer application that would enable user to extract data of a specific type and do a certain analysis on the data collection.
- Made using Visual Studio 2010 for PSS/E Load Flow and PSS/E Harmonic Frequency Scanner Tool

**Binary Conversion and Protein-structure Program,** 2014-2015  
University of Waterloo, Waterloo, Ontario

- Planned, constructed and tested a decimal to binary program and a search program where a file is read and then displayed in a certain format with user defined interactions. Programs are done in C#
- Applied theory learned in classes to successfully complete all parts of the program and further explored ideas through online research and personal side projects

**FRC Scoreboard and Community Check,** 2011-2014  
St. Robert Catholic High School - ICS 4U1, Thornhill, Ontario

- Planned and finalized complex virtual scoreboards using Java implementing Agile software development methods
- Development a logical system for importing data to community service tracker and exporting data to individual student records as well as an overall master file
- Applied knowledge of OPP in Java to create a community service hour tracker, using NetBeans IDE

## **EXTRACURRICULAR POSITIONS**

**Waterloo Hybrid,** University of Waterloo, Waterloo, ON 2014-Present

- Used Altium Designer to create schematics of circuit boards
- Collaborated with team to build the entire electrical network of the electric car

**First Robots Competition,** FIRST Robotics Competition, St Louis, Missouri 2012-2013

- Placed first in the FIRST Robotics Competition with Team 4001
- Designed, built, installed and tested critical components on the robot chassis as part of a team

## **VOLUNTEER EXPERIENCE**

**Staff and Technical Support,** First Lego League, 2013-2014  
FIRST Robotics Canada - St. Robert Catholic High School, Thornhill, Ontario

- Collaborated with staff members to successfully organize, run and test the First Lego League Competitions' equipment, including programmable robots, and LEGO blocks
- Configured sound systems and camera controls for live-broadcasting of the competition

**Placement Advisor and Trainer,** 2012-2014  
NightFlyers & Mt. Tremblant Ski Club - St. Robert Catholic High School, Thornhill, Ontario

- Trained new skiers and snowboarder on basic and advanced maneuvers
- Created and presented a list of appropriate locations to hold bi-weekly ski trips

**Conductor and Organist,** CMCC, 2755 Denison Street, Markham, Ontario 2011-Present

- Organized music playlist every week, and improved on practice schedules for members of choir

## **AWARDS AND CERTIFICATIONS**

**President's Scholarship of Distinction,** University of Waterloo, 2014  
Waterloo, ON

**Outstanding Volunteer Award,** Chinese Martyrs' Catholic Church, Markham, Ontario 2013

**Canadian Computing Competition,** St. Robert Catholic High School, 2013-2014  
Thornhill, Ontario