

# PAUL ASHBOURNE

Mechatronics Engineering, University of Waterloo  
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Aurora, ON, Canada  
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## SKILLS

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Top skills: Java, C++, Relational Databases (MySQL), PHP, JavaScript, HTML/CSS, MVC,  
Linux, Apache

Proficient: Python, Git, RobotC, VB.NET, VPN

Familiar: AutoCAD (2D), SolidWorks (3D)

## EMPLOYMENT EXPERIENCE

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### ESCTT Inc.

*Software Engineer*

MySQL, PHP, VB.NET, HTML/CSS, JavaScript, Linux Server, Python, VPN July 2013 – April 2014

- Built a **financial analysis application** that provides investment professionals with tools to conduct analysis of client portfolios. Beta feedback from financial professionals has been extremely positive.
- Developed a **health care database and application** for palliative care patients. Wrote a script to normalize and transfer data from old system while maintaining data integrity. Currently holds over 100,000 records. Set up VPN Server for secure access.
- Developed a **risk management web application** for project managers. Engineered the database, all application logic and the user interface. Includes automatic recurring billing system. Developed an extension for Microsoft Project that allows users to synchronize their projects. Early feedback from project management professionals has yielded excellent feedback.
- Maintained Linux web servers and deployed web applications.

### Kids' Great Minds

*Instructor*

Java, Visual Basic, C++

November 2012 – July 2013

- Created and executed lesson plans to teach students fundamental computer programming skills.
- Improved ability to communicate technical information.

## PERSONAL PROJECTS

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### Remote Desktop Application

July 2013

Java, Threading

- Developed the core functionality for a remote desktop client and server applications.

### Live Television Display Application

January 2013

Java

- Developed an application for Aurora High School that displays live weather, news reports and school announcements on television displays throughout the school.

### Sudoku Solver Application

October 2012

Java

- Developed an application that can solve any Sudoku puzzle. Uses a modified version of the backtracking algorithm for optimal performance.

### Video Game Development

October 2009 – June 2012

Java, VB.NET

- Notable projects include a Tetris game with graphics, a cribbage game with sophisticated artificial intelligence, Othello game, Guess Who game and a fractal tree generator.

## EDUCATION

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### University of Waterloo

*Candidate for Bachelor of Applied Science, Mechatronics Engineering*

September 2013 – Present

- Finished 4<sup>th</sup> overall in the entire 1A Mechatronics Engineering class with an average of 93.8%.
- Relevant Assignments:
  - Built and programmed a robot that located books on a bookshelf using colour barcodes and a binary search algorithm. [RobotC] (MTE 100, GENE 121)
  - Programmed a fuel-cell powered car to navigate through various obstacle courses. [C++] (MTE 100, GENE 121, CHE 102)

### Aurora High School

*Ontario Secondary School Graduate, French Immersion*

September 2009 – June 2013

- Awarded Principal's Award at graduation.
- University of Waterloo Fermat Math Contest School Champion.

## EXTRACURRICULAR ACTIVITIES

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### Aurora High School Robotics Team

Aurora, Ontario

*Team Captain*

September 2009 – June 2013

- Advanced to the **2010 and 2012 Robofest World Championships**, held at the Lawrence Technological University in Detroit, Michigan.
- Placed 4<sup>th</sup> in the senior game at the 2010 Robofest World Championship with a robot that cleared debris and rescued victims from a natural disaster simulation.

### Aurora High School Student Council

Aurora, Ontario

*President*

June 2011 – June 2013

- Developed leadership and team management skills.

### Beijing No. 4 High School

Beijing, China

*Teaching Assistant*

July 2011 – August 2011

- Created lesson plans with an aim to improve students' English skills.
- Drastically improved communication and teamwork skills.
- Learned to work effectively in a foreign and unfamiliar environment.