

## Skills Summary

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| * | Substantial experience welding, soldering and working with electronic circuits; developed by working with electronics, computers and automotive electrical systems |

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| * | **Comfortable working with and on computers.** |

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| * | Familiar with a wide range of software: |

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| Controls | RSLogix (PLC5), DVT, Cognex, Rapid, ControlNET, DeviceNET, SISO Tool, Simulink |

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| Productivity | Win 9X/NT, Linux, Word, Access, PowerPoint, Excel, Project, Outlook |

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| Design | AutoCAD, Solidworks, Illustrator, Fireworks, Photoshop |

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| Development | Matlab, MathCAD, Labview, C/C++, VB, Dreamweaver, Flash, HTML | |
| Starting to Learn | AJAX, PHP, Ruby on Rails, MySQL | |
| * | Excellent working independently and as a team | | |

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| * | Quick learner and good at thinking outside of the box |

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| * | Ability to adapt to various working conditions and apply analytical skills |

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| * | Fluent in both English and Portuguese languages. Intermediate level Spanish |

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| * | Pending US Permanent Resident application – Employment Authorization Document |

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| * | WHIMIS training gained through course of academic study |

## Education

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| |  |  |  |  | | --- | --- | --- | --- | | [University of Waterloo, Waterloo, Ontario](http://www.thiagoavila.com/resume/www.uwaterloo.ca) | Candidate for Bachelors of Applied Science in: | |  | | **Mechatronics Engineering** | | September 2003 - | |  | -Option in Biomechanics | Present | |  | -Option in Management Science |  | |

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| * | Relevant Courses: | Mechatronics, Sensors, Digital Controls, Circuits, Image Processing, Algorithms and Fuzzy Logic |

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| * | **One of few students attempting two engineering options**. |

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| * | Excellent academic standing and cumulative average of 80+%. |

**Work Experience**

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| |  |  |  |  | | --- | --- | --- | --- | | [Toyota / Lexus Work term](http://www.thiagoavila.com/resume/www.uwaterloo.ca) | Toyota Motor Manufacturing of Canada, Woodstock | |  | | **Research and Development** | | April 2007 - | |  | Thermal Imaging of Stamped Panels | September 2007 | |  | Thermal Expansion of Prototype Robots |  | |

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| * | Responsible for researching and developing solutions for several industry problems |

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| * | Worked extensively on automated split detection for pressed panels and repeatability of snake welding robots. |

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| * | Designed, tested and **patented** innovative way of detecting splits using differential calculus, Labview and thermal imaging. |

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| * | Worked with hardware manufacturers to trial and test potential hardware configurations. |

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| * | Technology has potential to save well over $2 million/plant at current scrap rate and received **outstanding job rating**, plus an offer to return |

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| * | Worked long hours and willing to put the time in to get the job done. 60 hour weeks was not uncommon |

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| |  |  |  |  | | --- | --- | --- | --- | | [General Motors Work Term](http://www.thiagoavila.com/resume/www.gm.com) | General Motors, Oshawa Truck | |  | | **Mechanical/Controls Engineering** | | September 2006 - | |  | Robotic Image Recognition | January 2007 | |  | Andon System - GMT 900 |  | |

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| * | Responsible for implementing modifications required for the GMT900 truck launch |

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| * | Work was primarily in the Wheel/Tire room and involved improving reliability, cycle time and quality of the manufacturing process |

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| * | Major projects include the redesign of the robotic stemmer, vision system scheduling and modifications to accept GMT900 rims |

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| * | Changes **saved** in excess of $200,000 and received **outstanding job rating**, plus 2 offers to return |

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| |  |  |  |  | | --- | --- | --- | --- | | [Ford Motor Company](http://www.thiagoavila.com/resume/www.ford.com) | Ford Motor Company, Windsor Operations | | 1st term | | **Industrial/Electrical Engineer** | | Aug 04 - Jan 05 | |  | Ford Falcon Engine Launch - Assembly and Machining | 2nd term | |  | Steam Cogeneration - Optimizing Boiler | May 05 - Aug 05 | |

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Term 1

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| * | Responsible for coordinating productivity improvements |

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| * | Used leadership skills to lead a team of coops |

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| * | AutoCAD was used for 3D modeling of various items required for production |

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| * | Helped launch the Falcon sports car engine which required process changes and line balancing |

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Term 2

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| * | Optimizing steam turbine downtime and cost analysis at the Ford Powerhouse for electrical generation |

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| * | Excellent rating from employer |

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| |  |  | | --- | --- | | **Other Employers** | | | Valiant Machine and  Tool | **IKE Building Maintenance** | |

**Interests**

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| |  |  |  |  | | --- | --- | --- | --- | | [University of Waterloo FSAE](http://www.thiagoavila.com/resume/www.thiagoavila.com) | 4th Year Project | |  | | Predictive Traction Control | | May 2007 - | |  | Dynamic Force Model of Vehicle | Present | |  | Torque Generation Control |  | |

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| * | Responsible for designing and developing predictive traction control to stabilize oversteer in vehicle |

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| * | System preemptively determines and prevents wheel slip |

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| |  |  |  |  | | --- | --- | --- | --- | | [CUTC Non-profit Organization](http://www.cutc.ca/2008/) | CUTC 2008 | |  | | Sponsorship Executive/Organizer | | September 2007 - | |  | Obtain sponsorship from corporate companies | January 2008 | |  | Design Delegate & Sponsorship Package  Setup/Run event |  | |

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| * | Assembling, overclocking and benchmarking high performance computers | |
|  | 3DMark, Sandra, Prime95, LAME, Crysis |
|  | Liquid cooling, phase change |

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| * | Designed and built LCD projector - 1500 Lumens / 400 watts |

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| * | Golf, bowling, hockey, fishing, and swimming |