THIAGO AVILA
4A MECHATRONICS
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Skills Summary

- Substantial experience welding, soldering and working with electronic circuits; developed by working with electronics, computers and automotive electrical systems
- **Comfortable working with and on computers.**
- Familiar with a wide range of software:

Controls	RSLogix (PLC5), DVT, Cognex, Rapid, ControlNET, DeviceNET, SISO Tool, Simulink
Productivity	Win 9X/NT, Linux, Word, Access, PowerPoint, Excel, Project, Outlook
Design	AutoCAD, Solidworks, Illustrator, Fireworks, Photoshop
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
- Quick learner and good at thinking outside of the box
- Ability to adapt to various working conditions and apply analytical skills
- Fluent in both English and Portuguese languages. Intermediate level Spanish
- Pending US Permanent Resident application – Employment Authorization Document
- WHIMIS training gained through course of academic study

Education

Candidate for Bachelors of Applied Science in:

Mechatronics Engineering — September 2003 - Present

-Option in Biomechanics

-Option in Management Science

- Relevant Courses: Mechatronics, Sensors, Digital Controls, Circuits, Image Processing, Algorithms and Fuzzy Logic
- **One of few students attempting two engineering options**.
- Excellent academic standing and cumulative average of 80+%.

Work Experience

Toyota Motor Manufacturing of Canada, Woodstock

Research and Development — April 2007 - September 2007

Thermal Imaging of Stamped Panels

Thermal Expansion of Prototype Robots

- Responsible for researching and developing solutions for several industry problems
- Worked extensively on automated split detection for pressed panels and repeatability of snake welding robots.
- Designed, tested and **patented** innovative way of detecting splits using differential calculus, Labview and thermal imaging.
- Worked with hardware manufacturers to trial and test potential hardware configurations.
- Technology has potential to save well over $2 million/plant at current scrap rate and received **outstanding job rating**, plus an offer to return
- Worked long hours and willing to put the time in to get the job done. 60 hour weeks was not uncommon

General Motors, Oshawa Truck

Mechanical/Controls Engineering — September 2006 - January 2007

Robotic Image Recognition

Andon System - GMT 900

- Responsible for implementing modifications required for the GMT900 truck launch
- Work was primarily in the Wheel/Tire room and involved improving reliability, cycle time and quality of the manufacturing process
- Major projects include the redesign of the robotic stemmer, vision system scheduling and modifications to accept GMT900 rims
- Changes **saved** in excess of $200,000 and received **outstanding job rating**, plus 2 offers to return

Ford Motor Company, Windsor Operations

Industrial/Electrical Engineer

Ford Falcon Engine Launch - Assembly and Machining — 1st term, Aug 04 - Jan 05

Steam Cogeneration - Optimizing Boiler — 2nd term, May 05 - Aug 05

Term 1

- Responsible for coordinating productivity improvements
- Used leadership skills to lead a team of coops
- AutoCAD was used for 3D modeling of various items required for production
- Helped launch the Falcon sports car engine which required process changes and line balancing

Term 2

- Optimizing steam turbine downtime and cost analysis at the Ford Powerhouse for electrical generation
- Excellent rating from employer

Other Employers

VALIANT®

IKE Building Maintenance

Interests

4th Year Project

Predictive Traction Control — May 2007 - Present

Dynamic Force Model of Vehicle

Torque Generation Control

- Responsible for designing and developing predictive traction control to stabilize oversteer in vehicle
- System preemptively determines and prevents wheel slip

CUTC 2008

Sponsorship Executive/Organizer — September 2007 - January 2008

Obtain sponsorship from corporate companies

Design Delegate & Sponsorship Package

Setup/Run event

<u>Assembling, overclocking and benchmarking high performance computers</u>

- 3DMark, Sandra, Prime95, LAME, Crysis
  Liquid cooling, phase change
- Designed and built LCD projector - 1500 Lumens / 400 watts
- Golf, bowling, hockey, fishing, and swimming