I. **July 2017 – Present – Hardware in the Loop Engineer at Ford Motor Company do Brasil Ltda**, multinational automotive company. Activities include: OBD and CCM (comprehensive component monitor) testing and validation, creating and implementing test routines to perform diagnostic tool message validation. Delivery of detailed test reports including reviews with technical specialists and managers. HIL Rig commissioning and Matlab Model interpretation are required to perform the tests. Training: 1 month on the job training – Dearborn-MI.

**Ford Transit CNG (Compressed natural gas)**

Transit was the first program tested in the Brazilian HIL rig, the main challenge was performing CCM\OBD tests without any training on hardware in the loop and with limited support due to team members operating in different time zones.
It was concluded successfully on time

**Ford Explorer 2L GDI**

I performed Explorer CCM\OBD tests after one month of on the job training at Dearborn (US).
We faced new challenges since the Explorer uses a new powertrain control module processor – multicore family and it also has GDI engine that requires the testing of many more sensors and actuators.
Multicore PCM run with 2nd generation Ford software, in this case all test sequences and scripts had to updated to support new SW parameter names.
The results were delivered 1 month before deadline.

**Validation of Diagnostic Information (PIDs)**

In order to take advantage of HIL capability, OBD PIDs validation tests had to be implemented for gasoline applications.

We modified test routines and automation tools from Diesel applications for Gasoline programs, new routines and test sequences had to be created to support this development, issues found during the implementation were fixed or sent to the correct team.

This pilot was successfully implemented and the process is being used in new programs.

**Integration HIL**

Due to the need to reduce the number of vehicle prototypes units, we are developing new functions implementing them in the HIL rigs.

I am currently working on the development of an integration bench between Instrument cluster and the powertrain control module to perform test validation of cluster displayed information, it is being developed on dSpace HIL and the cluster information is

Processed by the matlab image acquisition toolbox, at the end, PCM internal parameters, CAN messages and cluster information are compared to validate the system.

I. **July 2014 – July 2017 – Calibration Engineer at Ford Motor Company do Brasil Ltda**, multinational automotive company. Activities included: feature calibration development in the area of internal combustion engine control (direct injection and portico, gasoline and flex fuel) including engine start and warm up, component protection, temperature modeling, fuel consumption estimation and Start-Stop system implementation. Activities in chassis dynamometer: modeling oil and exhaust temperature and torque model validation for automated transmission. Investigation and resolution of mechanical and electrical defects in prototype or production vehicles. Knowledge of OBDBrII monitors calibration. Emissions and OBDBrII certification with the Brazilian regulatory department (Cetesb). Worked together with the quality team on investigation and resolution of several field problems. Worked together with different teams and in different areas of the company.

**Ford Fusion 2L GTDI**

Main activity on that program was modifying engine calibration to work with Brazilian fuel type (E27).
Activities that I performed on this program were, exhaust and oil temperature modeling, fuel consumption estimation, cold starts/warm up and STOP/START calibration
Fusion was the first Ford Brazil vehicle that worked with STOP/START system, in order to support the implementation, I spent 2 weeks with the Technical Specialist from the USA learning feature details, implementation, debugging and how to perform validation procedures.
As the single point of contact regarding this matter, I was able to implement modifications to improve overall system performance, after technical specialist approval, such as, number of stops in the emissions cycle and system behavior at toll queues.
Previous experience as a system engineer was fundamental to deliver this program on time, several new modules were implemented during the prototype phases including the transmission rotary shifter.
Body Control Module, ABS, Active Cruise Control, Instrument Cluster, HVAC and Rotary shifter, were updated and configured.

**New Ford Ecosport 2L GDI**

Due to late changes in the design, AGS – active grill shutter calibration had to be reworked to meet requirement targets. Since it is mandatory to the homologation process, calibration was prepared for the tests in a short period of time on target.
At the end of the program new VCT hardware was proposed for TVM action, it was implemented and a new VCT calibration was aligned with a technical specialist. I performed various tests to document the transparency between the calibrations, such as emissions tests, temperature modeling, engine protection, etc.

I. **February 2011 – July 2014 – System Engineer at MSX International do Brasil Ltda**, multinational company providing services at Ford Motor Company in Brazil. Activities included liaising with the PCM (powertrain control module) supplier and the integration between PCM and vehicle modules, investigation and resolution of mechanical and electrical defects in both prototype and production vehicles. Testing and validation of new parts, due to change of supplier or cost reduction actions. Worked together with various teams and in different areas of the company.

**Ford New Fiesta 1.5L and 1.6L**

The New Fiesta was the first local application that used PCM Ford software instead of supplier legacy PCM software, besides that KWP2000 was replaced by UDS ISO 14229 protocol.

As a system engineer the main challenge was working since the beginning of the program, supporting prototype building phases, debugging electrical issues and PCM software issues,

During the launch phase we detected several issues and fixed them before the production vehicle launch. End-of-Line tests were aligned with an EOL engineer.

Working closely with the service team was possible to identify that Instrument cluster replacement parts were being configured with wrong anti-theft flag and it inhibited the handshake between PCM and IPC.

I personally updated the replacement parts at the warehouse before delivery to dealers and this work resulted in a recognition certificate.

**Ford New Focus 1.6L and 2.0L**

The New Focus PCM was developed based on a new type of electrical architecture and other vehicle modules were using eldest electrical architecture, it demanded extra personal effort to build prototype vehicles, implement and test Ford dealer service tools.

**Fusion Hybrid and Fusion 2.5L**

Fusion Hybrid and 2.5L prototypes had several new modules, deep understanding of the electrical architecture and programming tools was fundamental to keep the prototypes updated during the build phases.

Close contact with D&R engineers of the modules, around the world was necessary to support software update activities including ABS, HVAC, IPC, Adaptative Cruise Control, BCM, among others.

**Production Vehicles: Ford Focus and Ford Fiesta**

PCM quality performance analysis, supplier liaison and dealer support were personal responsibilities that ran in parallel with new programs development.

Several technical bulletins were released to support dealer diagnostics and repairs. Visits to Dealers and trainings for Field Engineers were also part of my responsibilities.

These actions showed results reducing the number of PCM units replaced (R/1000) and quality costs (CPU).

II. **March 2009 – December 2010 – Consultant at Stock Car Brazil**, touring car auto racing. Responsible for team coordination and logistics. The activities included car setup, sensor installation, data acquisition and analysis, and electrical maintenance.

The Main challenges in that position were dealing with pressure on racing days and coordinating a team of technicians even though I had no experience. Fast personal development was necessary to deliver results on target and keep the team motivated.

III. **January 2008 – February 2010 – Electrical Engineer at Lobini Veículos**, Automotive Manufacturer. Tasks included the design of a wiring harness for a new model, improvement of the previous design, design and assembly of prototype electrical parts, tests and validation, data acquisition using National Instruments software and hardware. Responsible for the maintenance and repair of custumer`s cars.

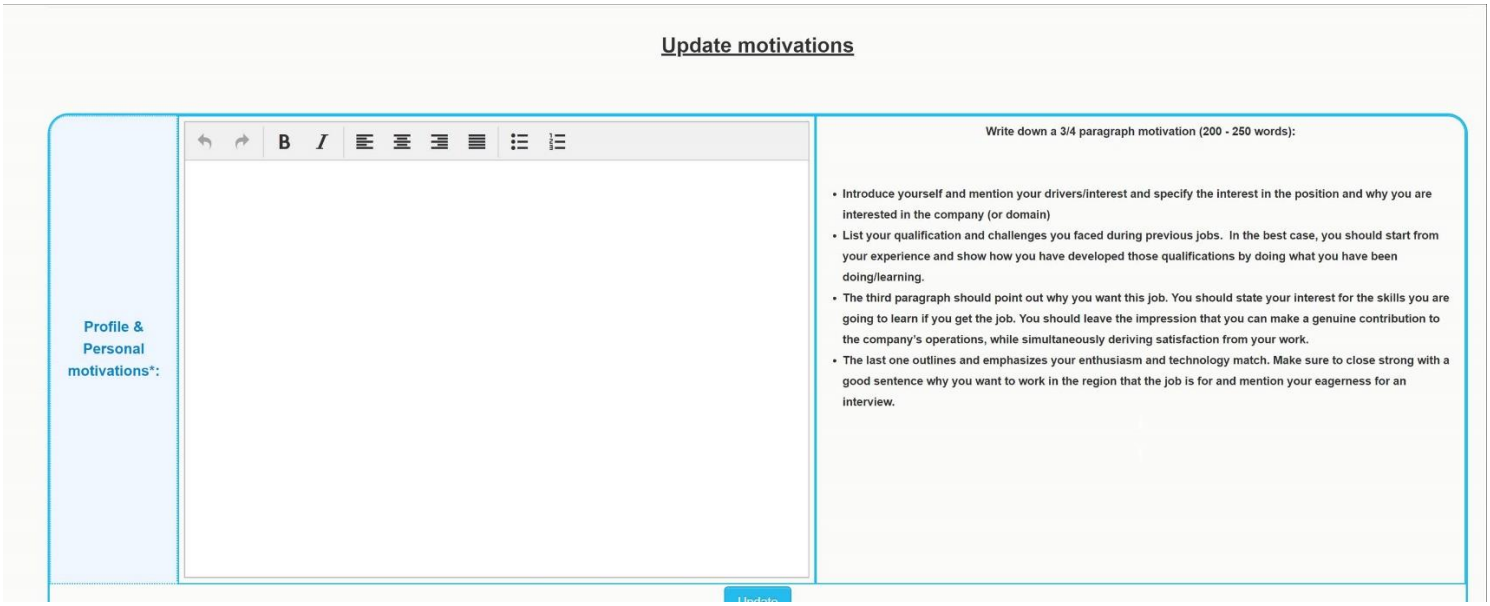
Lobini was a sports car based on LOTUS models, a team of new engineers was created to fix current model at the time issues and design a new model.

As electrical engineer my main task working with the current model at the time was to identify and solve the issue that was draining the battery within a few days. This problem had been noticed since the model was created – a period of 5 years.

I successfully resolved the issue after the identification of some sensors that were direct connecting to the battery instead of through the correct key circuit.

Regarding to the new model, the challenge was to create a flexible prototype vehicle that allows testing of 2 different Ford engines and 2 different PCM technologies. A dedicated wiring harness was created to allow both engines and PCMs, by just disconnecting some connectors.

I performed several activities of datalogging and instrumentation of the Lobini racing model on the racing track circuits, using AIM and National Instruments solutions to improve vehicle performance and lap times.




1 – Electrical Engineer with more than ten years in vehicle development and testing, among several areas such as electrical, racing, engine calibration, validation and testing. I am hands-on and am motivated by the desire to learn and have a commitment to deliver.

2 – Since the beginning of my career problem solving and troubleshooting have been present in my daily activities. Working for a small company and with racing cars/trucks gave me a good understanding of the whole car system it was a good base to start in a multinational company. Using the problem-solving methodology allows me to improve my skills and I had the opportunity to work on both sides of V-model.

3 – I have always had a strong desire to work abroad, learning about new technologies and different cultures, are my main motivation to apply for this position. My technical skills are relevant to this position and my experience can contribute to deliver the expected results.