

Barry St. Pierre

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Career Summary

I am a technical manager who enjoys removing roadblocks so my teammates can focus their brilliance and creativity on their tasks and goals. I am looking for a position where I can combine these attributes with further developing my personal interest in iOS programming and computer security.

Professional Experience

Mahindra GenZe, Ann Arbor, Michigan

Mahindra GenZe is a start-up electric scooter and eBike manufacturer backed by Mahindra & Mahindra.

Manager – Homologation and Engineering Services

March 2017 – Present

- I am responsible for managing GenZe's homologation activities, which include ensuring the company meets US, and European regulations and investigating requirements for possible future markets.
- We successfully completed the Euro3 approval process working with our homologation partner, IDIADA.
- I am currently working on achieving vehicle approval under the new Euro4 rules for L1e-B category vehicles with a target approval date of March 2018.
- I am also responsible for managing the product validation, CAD and CAE activities. I have a team of local CAD operators as well as a team of CAD, CAE and test validation engineers in India.
- GenZe's CAD data management system for released data consisted of saved 3D STEP files and saved PDF drawings. We wanted to setup our CREO CAD system to implement a data freeze and release process within the CAD environment. Initial discussions with our software reseller did not give us confidence that they would be successful in handling this conversion for us and ultimately told us it could not be done. We decided to take on this task on our own. After many iterations of completing the updates on a test server and testing the results, we had enough confidence to implement on the production server. We upgraded the production server and are in the process of freezing all of our current CAD data.

Senior Engineer

November 2012 – March 2017

- I collaborated with the D&R engineer to design the cast aluminum frame using FEA to evaluate its physical properties. I used *Motorcycle Dynamics* by V. Cossalter to learn the vital structural characteristics for motorcycles.
- I mentored interns to teach them the tools and techniques used to develop mechanical designs.
- I worked with global suppliers to design and release scooter parts. I was part of the team that evaluated potential brake system suppliers and worked with the selected supplier to develop a system that met the FMVSS requirements.
- I assisted my manager in developing a durability test plan. I worked with Defiance Exova personnel during two-poster testing and with TRC personnel during track durability testing to ensure that the tests met our needs.
- When the company needed someone to make sure our scooter met US FMVSS requirements, they asked me to take on that role. I worked with product development and the COO to ensure the company had all the processes in place to meet all of the product, record keeping and reporting requirements.
- The GenZe asked me to manage the workload for the CAD group and, eventually, to be the manager the members of the CAD group.

FORD MOTOR COMPANY, Dearborn, Michigan

Ford Motor Company is an international automotive manufacturer.

Product Design Engineer

April 2002 – November 2012

- I performed durability CAE analysis for the F-150 pickup box. I would complete standard durability analysis of new designs as well as trouble-shoot issues found during testing of pre-production units. This included determining what load caused the issue, altering the design to address the issue and working with testing to validate the proposal.

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(FORD, continued)

- I mentored a member of the Ford College Graduate (FCG) program. I gave him a project to evaluate several proposals for stiffening the Mustang body by using bracing behind the rear seat. He modified a Mustang body model to represent the proposals. The FCG analyzed the normal modes and static torsional stiffness of the proposals and presented the results to the D&R engineer.
- I left Ford to help develop and launch an electric scooter for Mahindra GenZe.

Metrics Specialist

January 2000 – April 2002

- I worked in a group that extracted data from computer logs to evaluate the performance of Ford's design data database systems (C3P) in order to spot issues and bottlenecks when they happened.
- I returned to Product Development to work on the F150 pickup box durability.

Research Engineer

July 1999 – December 2000

- I optimized the engine mounting for the Ford Five Hundred and Freestyle to minimize perceived engine vibration.
- I moved to the Ford C3P group to get more familiar with CAD data management.

VISTEON, Dearborn, Michigan

Visteon is a supplier that was spun off from Ford Motor Company.

Product Design Engineer

January 1998 – June 1999

- I worked in the Steering Systems Engineering group analyzing steering columns, steering gears and hydraulic pumps.
- Before leaving this group I found my replacement and developed a successful training plan for her.
- I transferred to Ford's NVH CAE group to work on engine mounting design.

ALTAIR ENGINEERING, Allen Park, Michigan

Altair Engineering is an engineering consulting company and engineering analysis software company.

Structural Engineer

November 1994 – January 1998

- At Altair I performed analysis to support the investigation of creating a low-cost convertible. Eventually, the study vehicle was released as the Ford Thunderbird (but was not low cost).
- I left Altair to work on steering systems CAE at Visteon.

NOISE CANCELLATION TECHNOLOGIES, Linthicum, Maryland

Noise Cancellation Technologies was a company working on active noise cancellation.

Technology Leader, Development Tools,

Research & Advanced Development

June 1990 - November 1994

- I developed tools for studying noise control using MATLAB and the C programming language. One tool I developed allowed the user to select parameters for an active control Application Specific Integrated Circuit (ASIC) that was designed by NCT and simulate how the system would react to the control algorithms. The simulation allowed the user to supply their own transfer functions for the systems involved or use a standard set included with the tool.
- I worked on research projects for new products including a Helmholtz resonator to cancel the noise from a blower.
- I left NCT after a large layoff because my wife wanted to move closer to home.

• Education

- Completed a week long class in Swift programming and iOS development, October 2016
The Big Nerd Ranch, California
- **Certificate** in Information Assurance (Data Security), June 2008
Washtenaw Community College, Ann Arbor, Michigan
- **Master of Science** in Mechanical Engineering, May 1992
Thesis title: Effects of Observing Uncontrolled Degrees of Freedom on Active Vibration Isolation
University of Maryland, College Park, Maryland
- **Bachelor of Science** in Mechanical Engineering with a CAD/CAM option, June 1985
Michigan State University, East Lansing, Michigan