

Benoit Picard

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Profile

- Energetic and creative engineer with strong focus on making things work
- Strong team-player with demonstrated skills in leadership and in communication
- Reliable, trustworthy, hardworking individual who is eager to learn
- Fast and accurate understanding of physical phenomena
- Genuine interest in renewable and alternative energy

Education

Bachelor's degree in mechanical engineering, GPA of 3.9 2006 - 2010
Université de Sherbrooke, Quebec, Canada

- Program specialized in product development and design
- Additional master's level classes completed in engine and in advanced thermodynamics

Specific knowledge & Languages

Languages: French, English

Engineering software: Matlab, Simulink, SolidWorks, FeatureCAM, Ansys (FEA & CFD)

Automotive control systems: AVL Puma Open & Equipment, ATi Vision, CANalyzer

Other software: Microsoft Office and Access (including Visual Basic), Photoshop, HTML, CSS, Javascript

Professional experience

Westport Innovations Inc., Vancouver BC 2011 - Present
World Leader in Natural Gas & Dual-Fuel Engines Technologies

Engine Development Engineer - Combustion, Performance and Emission

- Calibration of engine controllers for heavy-duty and high-horse power dual-fuel engines
 - Performance optimization of a high pressure natural gas fuel system
 - Software validation and improvement using Simulink/Targetlink
 - Emission calibration for North-American and European certification
 - Part of a small collaborative and multi-functional team in a fast-paced environment
- Engine testing from prototype stages to production
 - Design of experiment (DoE) and response modeling for each iteration
 - Review and root cause analysis for failures and shortcomings with design team
 - Advanced data analysis of multi-variable problems
 - Post-processing coding and automation using Matlab
- Management and coordination of engine test cells' activities
 - Frequent instrumentation quality review with support of technicians
 - Day-to-day problem solving for maximum up time
 - Leading and mentoring of colleagues and technicians toward technical goals
- On-vehicle powertrain testing at OEM test track

Professional experience (continued)

CAMUS Research group, Université de Sherbrooke Winter 2010

Engines and actuators design research group

Research Assistant – Rim-Rotor Rotary Ramjet Engine Project (R4E)

- Development of test bench for hydrogen jet engine prototype testing
- Implementation of combustion test modules and remote control setup
- Parts fabrication with 4 axis CNC machining

Pratt & Whitney Canada, Longueuil QC Summer 2009

Global leader in motorization of small aircrafts

Designer – Product Center Engineering

- Advanced learning of functionalities for different aircraft engines
- Technical review of supplier changes and cost-reduction initiative
- Design modifications to reduce interference and non-conformance

AAER inc., Bromont QC 2008

Wind turbines manufacturer – 1,5 to 2 MW

Mechanical engineer in training

- Review of the wind turbine technology and adaptation to North-American standards
- Design of assembly line layout for production start-up
- Development of the computer-controlled purchasing-production system

SCN Lavalin inc. – Head office, Montréal QC

Engineering and construction firm

Software service clerk & Computer inventory manager (2x 4 months internships) 2006 - 2007

Extracurricular activities – technical projects

Projet Infinity, Université de Sherbrooke 2009 - 2010

Development of a fuel efficient vehicle, and winner of the SAE Supermileage competition in June 2011 with consumption of 2158 MPG

Technical director and chassis head designer

- Technical leadership from the prototype design requirements to successful road tests
- Design and fabrication of the carbon fiber monocoque chassis
- Engine optimization on dynamometer test bench
- Microcontroller programing for vehicle display and throttle-by-wire engine (Arduino)

Baja SAE, Université de Sherbrooke 2006 - 2009

Design and fabrication of an amphibian ATV vehicle for participating in international competitions, 1st place winner in 2007 and 2009

Team lead and technical director (2009), Chassis director (2008)

- Management of budget, schedules and 20 team members
- Design supervision of all vehicle components
- Detailed design and optimization of the chassis and suspensions

Personal interests

Sports – Volleyball, tennis, kitesurfing, surfing and snowboarding
Travel, tourism and culture – Peru, Greece, France, Sweden, and of course North-America!
Home projects – from building my own backcountry splitboard to a home cooking website
Keeping up to date – Artificial intelligence, aerospace progress and financial markets