

Brian L. Doorlag

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OBJECTIVE

To design products that benefit the world and improve people's lives

EDUCATION

Bachelor of Science in Mechanical Engineering

Western Michigan University, Carl and Winifred Lee Honors College

GPA: 4.0

Graduated: April 2009

EXPERIENCE

Tesla, Inc. | *Manager of Suspension, Steering, Wheel, and Tire*

April 2012—Present

Responsibilities:

- Lead a team of 9 engineers with respect to all personnel, staffing, and technical concerns
- Lead the development of products through all stages: requirement setting, design development, request for quote, supplier selection, prototype procurement, validation, signoff, launch, and field support
- Collaborate across the company to ensure highly integrated and optimized products for the customer
- Lead the development of new technologies

Products Launched:

- 2013 Model S: Responsible Engineer for Chassis+ Suspension package
- 2014 Mercedes B-Class EV: Responsible Engineer for Powertrain Mounting Frame
- 2014 Model S Dual Motor: Responsible Engineer for Knuckle, Stabilizer Bar, and Damper Fork
- 2015 Model X: Responsible Engineer for Front Suspension, Technical Lead for Rear Suspension
- 2017 Model 3: Technical Lead and Manager of Suspension, Steering, Wheel, Tire, Hub, Halfshaft, Subframe

Key Accomplishments:

- Completely redesigned the Model 3 Rear Suspension to achieve >50% cost reduction and improved performance

<http://www.motortrend.com/cars/tesla/model-3/2018/exclusive-tesla-model-3-first-drive-review/>
<http://www.roadandtrack.com/new-cars/first-drives/a15070866/tesla-model-3-test-drive-review/>

- Led the implementation of the world's first mass production Steel + Glass-Reinforced-Plastic Hybrid Suspension Control Arm for superior cost/mass vs. conventional Steel and Aluminum designs.
- Led the implementation of a new Halfshaft Seal Interface on Model 3 to improve efficiency/range. Overcame tight schedules and significant initial pushback from several of the teams involved.
- Conceived and implemented several design changes to reduce the cost of the Mercedes B-Class EV Powertrain Mounting Frame.
- Developed several engineering tools to aid design, including a fatigue calculator, tire load capacity calculator, tire wear calculator, steel weldability calculator, shot peen residual stress calculator

Honda R&D Americas, Inc. | *Suspension and Tire Design Engineer*

July 2009—April 2012

Responsibilities:

- Led the design and validation of Suspension and Tire components

Products Launched:

- 2012 Acura TL: Responsible Engineer for 19in All Season Goodyear Tire
- 2014 Acura MDX: Responsible Engineer for Rear Stabilizer Bar, supported Rear Suspension development

Key Accomplishments:

- Learned the Honda development system and engineering best practices
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ACTIVITIES AND PATENTS

- Formula SAE: 2017 Design Judge, 2011 Tech Inspector, 2007-2009 Competitor (Drivetrain Lead, Frame Lead)
 - Patent US20140197285A1, Vehicle Hydraulic Brake Hose Assembly
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SOFTWARE

- CAD (CATIA, SolidWorks, AutoCad)
- FEA (CATIA, COSMOSWorks)
- Suspension Kinematics (Lotus Shark)

PROFICIENCIES

- Mechanics of Materials
- Mechanism Dynamics Analysis
- Material Strength and Fatigue

QUALITIES

- Self-Motivated
- Results-Oriented
- Meticulous