

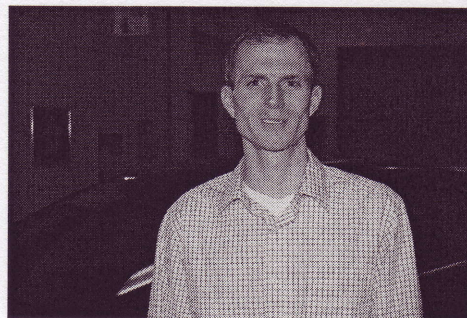


Ben Pence: Young Prognosticator Uses Skills in Place of Magic to Help Drivers Get the Most from Their Cars

Background

Ben Pence likes to predict things, but prefers to use actual facts and figures as opposed to a crystal ball or magic cards.

Perhaps that's why the 30-year-old loves his job so much as a Ford engineer working in battery and vehicle controls on projects that essentially predict where, when and how a car is going in order to make it operate more efficiently.



And as one of the newest among the growing army of workers at the Advanced Electrification Center – with Ford less than one year – Pence represents the hugely diverse array of those now working at the center.

"It's been exciting. One of the main reasons I wanted to work at Ford was the mission to lessen the impact vehicles have on our environment," said Pence. "Another main reason was to be involved in trying to make the most efficient vehicles. I can see already that I made the right decision."

Pence's résumé includes work at Honeywell International where he developed software to safely control jet engines under failed sensor conditions. He also has experience in robotics and has written autopilot code for small unmanned airplanes.

He said he uses many of the skills he acquired working on those projects to do his work today. One of the most significant is called Bayesian Estimation – a fancy name for the act of using math and a few known variables to predict future events.

"So if you are pretty sure that you are going to stop somewhere when you drive – say work or home – the car's system would be able to effectively learn and predict those stops and ensure that the battery is used more efficiently," said Pence.

His life and passion

- Pence, 30, is a native of Thatcher, Utah – a farming town with less than 1,000 residents
- Pence earned a master's degree and Ph.D. in mechanical engineering from the University of Michigan. Also, he obtained a bachelor's degree in mechanical engineering from Brigham Young University
- Pence is a scoutmaster for the Boy Scouts, responsible for leading a group of 11-year-old boys. The troop's agenda for the year calls for many events including camping, cooking, biking, swimming, rock-climbing and exercising with hopes of helping the boys become "better leaders, citizens and family members"
- Pence and his wife Lorissa have four children

What he does for Ford

- As an engineer in battery and vehicle controls, Pence works on developing applications in the area of prediction analysis with a goal of coming up with tools that could lead to more efficient operation of vehicles
- One of his first projects has been as part of the team developing a system to predict how far a car can go based on the amount of charge left in the battery system using variables such as battery voltage, battery current and vehicle speed
- Pence spent some time working on the assembly line of the F-150 to experience firsthand how his own work relates to that of the line

###