

Preventing crashes before they happen

October 1 2010



A new median on busy Brigham Young University Parkway in Orem limits the number of places where drivers can turn left.

The minor inconvenience is easier to bear when you hear what BYU statistics student Andrew Olsen is discovering: The new median likely prevents three fatal or incapacitating accidents per year.

For his mentored research project, Andrew analyzes crash data supplied by the Utah Department of Transportation. To determine whether the new, tree-lined divider on University Parkway made driving safer, Andrew learned a sophisticated [statistical technique](#) called hierarchical Bayesian modeling.

He also adjusted the way he says goodbye to his wife each morning.

“Don’t become a data point today,” he says.

Statistics professor Shane Reese and engineering professor Grant Schultz serve as mentors to Andrew on the crash research. Together they are authoring a study to assess a number of experimental safety interventions such as cable barriers, raised medians and drowsy driving warning signs.

“Andrew has demonstrated an amazing amount of initiative with this project,” Reese said. “As an undergraduate, he has tackled important statistical methodological development, [computer programming](#) and even taken a primary role as author of the study.”

Andrew is enrolled in the integrated bachelor’s and master’s statistics program and hopes this experience will open the door to Ph.D. programs in biostatistics at Duke or Harvard.

“It’s so helpful to start research early,” Andrew said. “That’s the best thing you can have going for you heading into grad school.”

Provided by Brigham Young University

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