CS840 Project 6:

LSP Method for Sportbike Evaluation

Samuel Gluss

Jozo Dujmovic

5-16-2016

Abstract – In the words of Kevin Cameron, “who are you? And, being who you are, what do you require from your motorcycle? Ask yourself,” and that is just the purpose of this paper (Cameron 8). There is a moment in everyone’s life where they are interested in purchasing a motorcycle, and many reasons can drive this decision. What motorcycle should they buy? Who is the buyer, what kind of motorcycle are they looking for, and what do they want to use it for? The motorcycle itself is a complicated multivariable system, and it is matched in complexity by the parameters of the buyer. The stakeholder in this case could be a 5’2” college girl looking for a suitable bike to get her to school, or a 6’1” AMA champion looking for a new ride to secure his next trophy with. Will the college student be satisfied with a 200 horsepower machine where, once astride, she cannot place both feet securely on the ground? This is not likely, nor is the Champion going to be satisfied with anything less than the fastest possible motorcycle. Everyone else is on a continuum, so the evaluation of the motorcycle must necessarily take into account its operator. This paper will propose a design of an evaluator for motorcycles using the LSP method, and a plan for diversifying this evaluator to adapt to the needs of varying stakeholders.

Introduction – For the purposes of our paper, we will consider the stakeholder to be an American man aged 25, of entirely average height and weight. For that age, the average weight is 170 pounds, and the average height is 5’10”. By contrast, the weight and height of the average woman is 135 pounds and 5’5”, markedly lighter and shorter. This will

References

1. Cameron, Kevin. Sportbike Performance Handbook 2nd edition. Minneapolis: Motorbooks, 2008

2. Foale, Tony. Motorcycle Handling and Chassis Design. Spain: Tony Foale, 2002

3. halls.md