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Rolando Cardenas* (rcardenas4@yisd.net), 8100 Turquoise Street, El Paso, TX 79904. *The Bayesian Quarterback: A New Model for Rating NFL Quarterbacks*. Preliminary report.

Our fascination with the National Football League stems primarily in the adoration of its athletes. The passion exuded by fans is apparent in the billions of dollars of television revenue, merchandising, and legalized gambling participation through various fantasy leagues. Fans want to be a part of the game itself; to judge and evaluate a player's performance. For many years, one of the most controversial statistics is the NFL Passer Rating which consisted of four main descriptive statistics in evaluating a quarterback's performance. In 2011, ESPN introduced the "Total Quarter Back Rating" which including controversial metrics such as "the clutch index" referring to quarterback performance under duress. These rating systems are intriguing and also frustrating because neither one can be considered the definitive system capable of projecting or rating quarterback's performance. A football game is not static, but rather a contest that ebbs and flows based on the strengths and imperfections of the players themselves. I propose a new model for rating NFL quarterbacks; a dynamic model that includes descriptive statistics in addition to a Bayesian-Recursive algorithm which considers "a priori" and "a posteriori" information to adjust the scale of the traditional QB calculations. (Received September 23, 2015)