

Assessing Athletic Performance with a Wearable Inertial Measurement Unit
Stephen Mitchell
James Madison University

Abstract

The drop jump ratio is a metric used to measure fatigue by finding how quickly and forcefully a person can reverse their momentum after dropping off a raised platform. Most commonly used for competitive athletics, the drop jump ratio is useful for tracking performance over time. The current method for measuring the drop jump ratio requires a force plate to find when a participant touches and leaves the ground. Force plates are expensive devices, which therefore restrict the drop jump ratio metric to those that can afford to tools to measure it. The PlayerTrak project explores how wearable computing could be used to provide a larger population access to drop jump ratio data by examining the feasibility of using commercially available accelerometers to measure the metric. This research will show initial results comparing drop jump ratios measured with a worn accelerometer and a force plate in a biomechanics lab.

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