The OpenBiomechanics Project

The Open Source Initiative for Anonymized, Elite-Level Athletic Motion Capture Data

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Keywords: open access, baseball, pitching

Abstract

Interest in quantifying human movement, particularly in elite sport, increases with each passing year. However, analysis of sport biomechanics data has traditionally been restricted to academic laboratories and professional sport organizations. Public sport biomechanics resources would democratize access to human movement data and accelerate progress and innovation for the sport biomechanics field as a whole. In this paper, we introduce ***The OpenBiomechanics Project***, an initiative started by ***Driveline Baseball Research & Development*** to provide free, elite-level, research grade motion capture data to the general public for independent individual exploration and analysis. We begin by providing raw and processed data from a sample of 100 baseball pitchers. We then discuss future directions within baseball, expansion to other sports and athletic movements, and outline supporting documentation and additional resources.

1 Introduction

Open access resources are available in other biomechanics sub disciplines [1].

2 How to Use

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2.1 Terms of Use

2.2 Naming Conventions

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2.3 Fileshare and GitHub Repository

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2.4 Citing and Contributing

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3 Discussion and Future Directions

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4 Additional Resources

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References

[1] Erdemir, A. Open knee: open source modeling and simulation in knee biomechanics. *The journal of knee surgery*, 29(02):107–116, 2016.