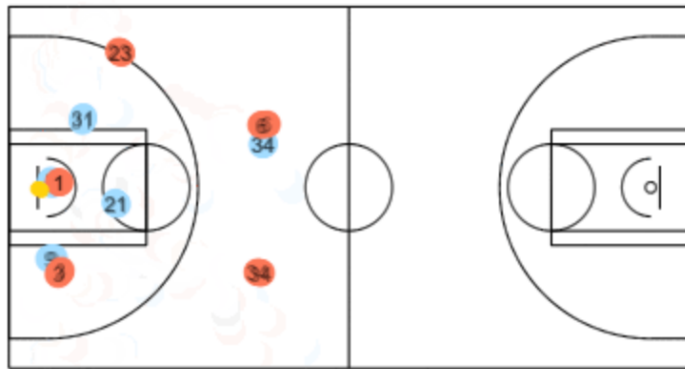
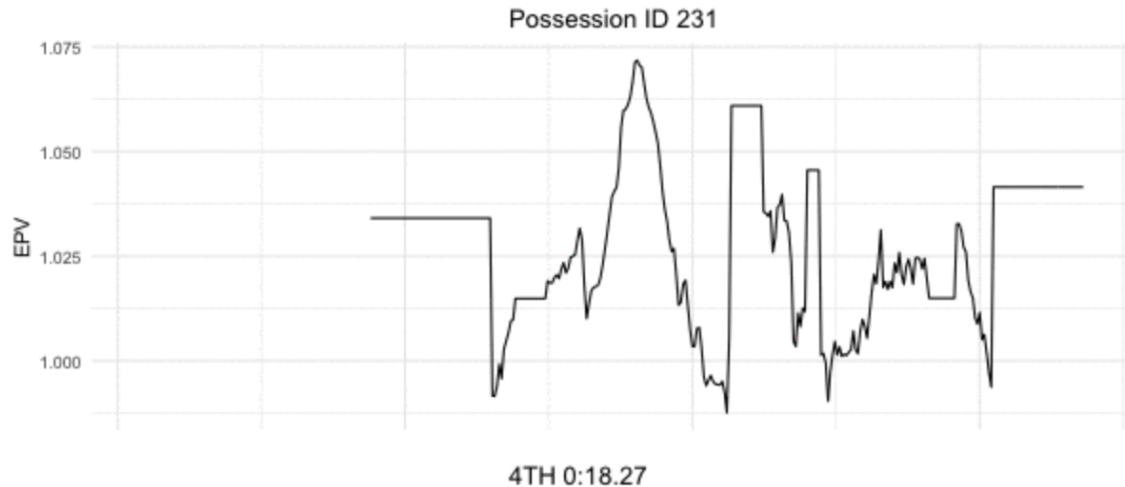


# Animating Expected Possession Value in the NBA with Player Tracking Data

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## Introduction

In a MIT Sloan Sports Analytics Conference Paper, Cervone et al create a metric called **Expected Possession Value, EPV**. They use optical player tracking data to calculate the number of points the offense is expected to score by the end of the possession *in real time*, given everything we know now.

## EPV Formula

$$EPV(t) = E[\text{points} \mid d_t] = E[\text{points} \mid \text{macro in } (t, t + \epsilon], d_t]P(\text{macro in } (t, t + \epsilon] \mid d_t) + E[\text{points} \mid \text{micro in } (t, t + \epsilon], d_t]P(\text{micro in } (t, t + \epsilon] \mid d_t)$$

## Main Contribution

I extended the above paper by using `ganimate`, a R package for animations, to illustrate the change in EPV during a single possession. Also, I interpreted each movement during the final minute of a NBA game on November 10th, 2013, between the Miami Heat vs Brooklyn Nets within the context of Expected Possession Value.

For more detail, please read this [blogpost](#)

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