CameramanVis:
Where the Camera Should Look
Camera angle is important

A good angle gives more information (ball, players and events)
Motivation

Our method vs others user study result (data sanitized for public posting due to pending publication)

Visualizing the soccer data
Data

A table of time series spatial data
48-min (5,700 frames) camera angle, player location
Multiple scale spatial feature from player locations
Users and Tasks

Researcher
CameramanVis: Where the Camera Should Look?

(a) Camera Angle View

(b) Feature View

(c) Query View

Feature Distance Type: Euclidean
Angle Threshold: 5

Frame 1:
- Frame Number: 3255000
- Angle: -29.4

Frame 2:
- Frame Number: 3318000
- Angle: -66.3

Angle Distribution (KDE)

Feature Mean and STD

Dimension

Angle Range: [-50.0, 50.0]
Global View

Principle: overview first, details on demand
Coding: shape and colour
Outlier View

Principle: side-by-side comparison of small multiple views
Coding: spatial position and colour
Multiple distance types
Interactive with camera angle view
Scientific style
Angle: histogram, kernel density estimation (KDE)
Feature: bar chart with error bar
Interactive with feature view
Demo video
Conclusion & Future work

Conclusion:
Design a system to understand camera angle and player location relation in soccer data
Benefit our research in the long term

Future work:
User feedback
Fine turn the interface (colour, size)
Thanks!