

Entrepreneurship and Soccer Analytics

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SOCCERMETRICS
RESEARCH & CONSULTING

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From Blog to Startup

A post: “Moneyball and Soccer”

A new soccer stat analysis blog

Started attracting interest!

Transition to startup company

Overview

What is soccer analytics?

Why soccer analytics?

What are its challenges?

What is its current state?

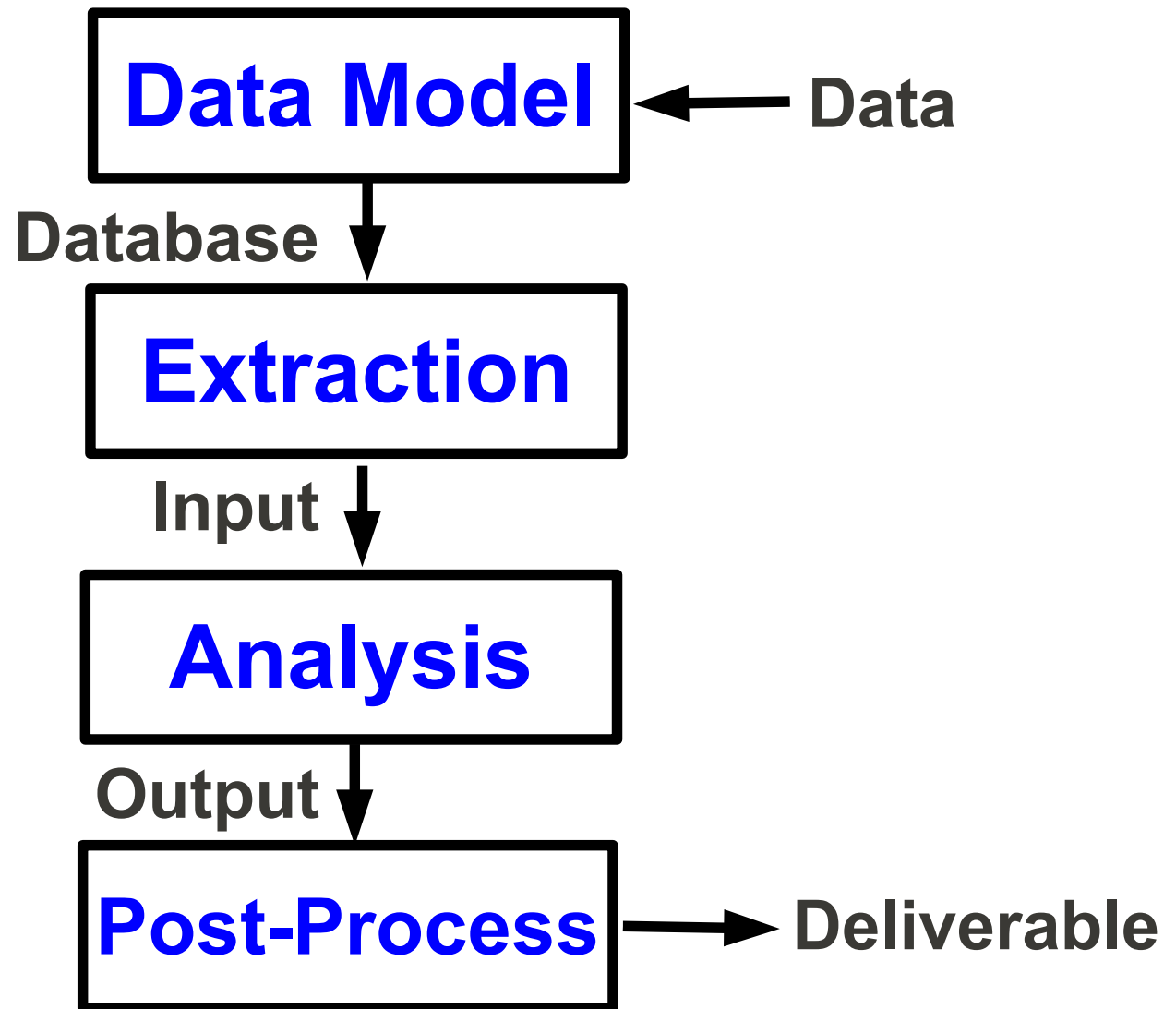
What is its future?

What is soccer analytics?

Quantitative assessment of events related to the sport of soccer

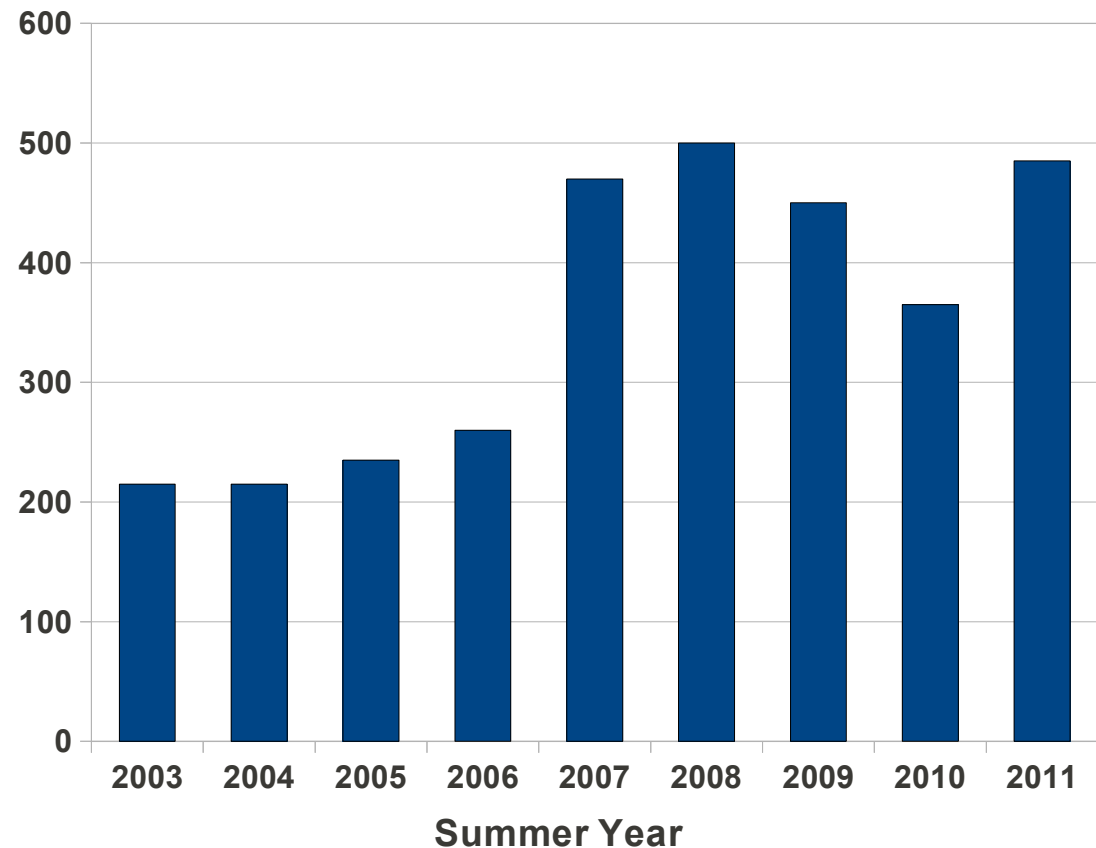


Analytics Infrastructure



Why soccer analytics?

**Summer transfer fee
payments in English
Premier League, 2003-2011**
(millions of British pounds)



Source: Deloitte

**Personnel
payments are
a billion-dollar
endeavor**

Why soccer analytics?

**Systematic assessment of player
and team value**



Why soccer analytics?

Maximize value of investments
Create marginal performance gains



Winning



Losing

Why soccer analytics?



External pressures

Competition

Regulations

What are its limitations?

Not a match predictor

Not a “coach-in-a-box”

Initial assumptions



No, I'm not into betting!

Choose your customer:

Betting industry

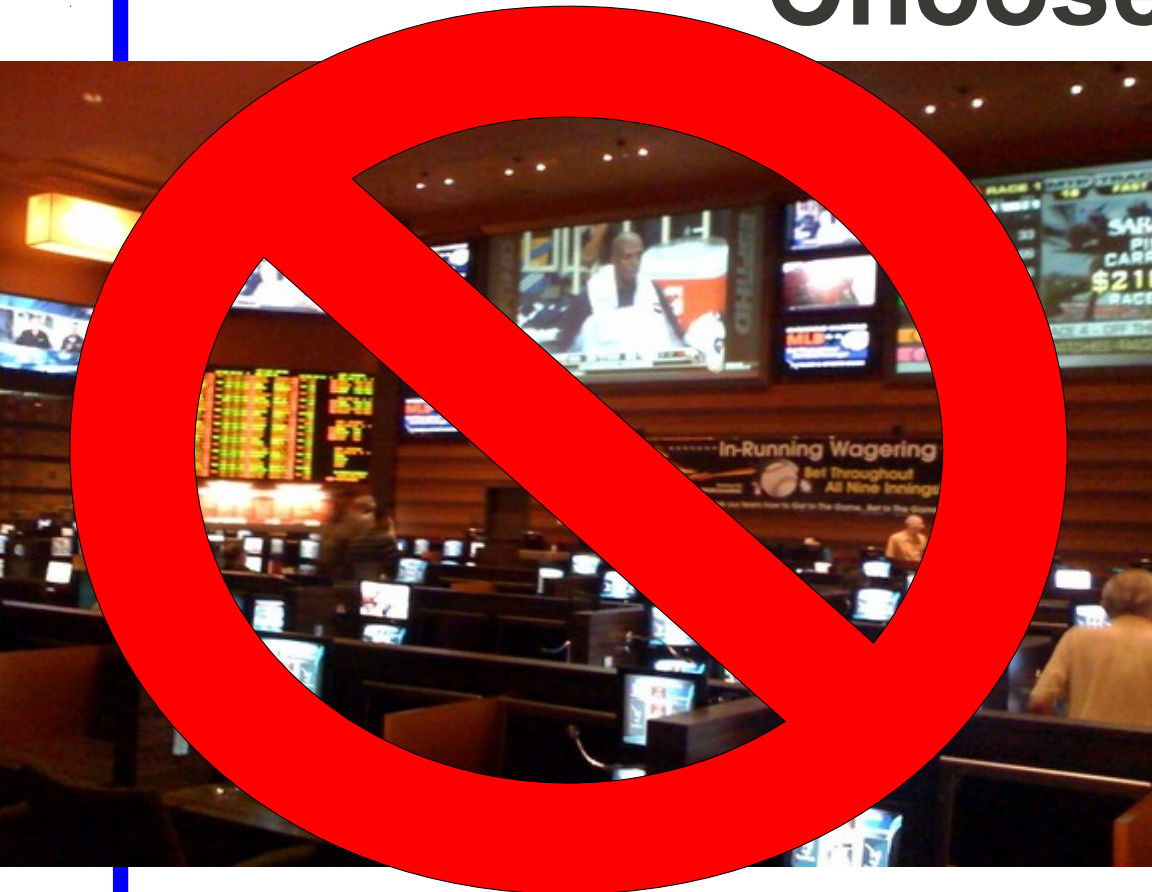
or

Soccer industry

Morality

Legality

A point to prove



Cantor Gaming – M Resort, Las Vegas

What makes soccer analytics hard?



Data Problem

Limited

Neutral

Summary

Analysis Problem

Complex invasion team sport

Soccer Data Companies

Company	Location	Specialty
Opta Sports	London	Live sports data feeds
Prozone (now Amisco)	Leeds, UK Nice, France	Real-time player and event tracking
Tracab	Stockholm	Real-time 3D player and event tracking
Match Analysis	San Francisco	In-match player and event tracking

Complex Invasion Team Sports¹

Cooperative action

Move object to defended position

Offense/defense interdependent

Continuous/segmented play

Specialized or hybrid playing roles

¹Bill Gerrard, “Is the *Moneyball* Approach Transferable to Complex Invasion Team Sports?”, International Journal of Sport Finance, November 2007.

Examples



More Examples



What makes soccer unique?

Cooperative and interdependent actions



What makes soccer unique?

Hybrid offensive and defensive roles



What makes soccer unique?

High level of continuous play



Soccer Analytics Challenges

Technical

Difficult to formulate

Difficult to solve

Data

Sparse

Restricted access

Acceptance

Cultural resistance

Technical Challenges

What is soccer, essentially?

Stochastic processes

Nonlinear dynamical system

Run by people

**Attempt to study rationally an irrational
process**

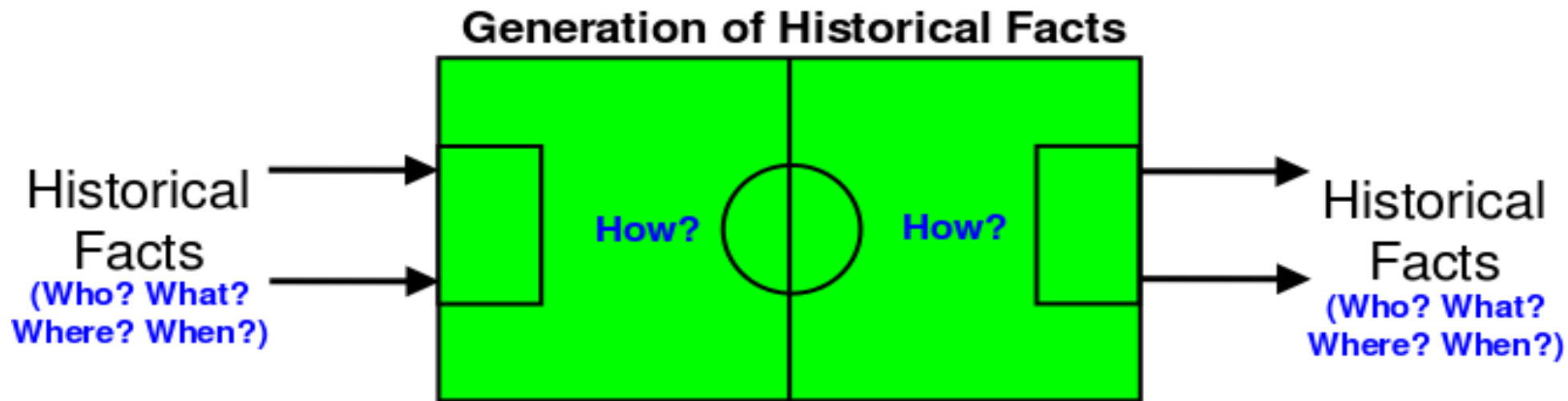
Difficult to formulate

Difficult to solve

How good is “good enough?”

Data Challenges

**Sparse and neutral
summary statistics**



Internal data creates historical data

Nonexistent before 1990s

Proprietary

Open Source Data Model

Basic and comprehensive database

Flexible

Extensible

Open-source strategy

Public relations

Open standards

Revenue sources

The screenshot shows a web-based form titled "Match Entry - [Preview]". It contains several sections for data entry:

- Match ID**: A text input field.
- Date**: A date input field with the value "1901-01-01".
- Match Overview**: A section with four dropdown menus: "Competition", "Round", "Venue", and "Referee".
- Home Team**: A section with two dropdown menus: "Team" and "Manager".
- Away Team**: A section with two dropdown menus: "Team" and "Manager".
- Match Time**: A section with two input fields for "1st half" and "2nd half", both containing the value "45".
- Attendance**: A section with one input field containing the value "0".
- Buttons**: At the bottom, there are three buttons: "Home Lineup", "Away Lineup", and "Environments".
- Footer**: A row of five buttons: "Add", "Save", "Delete", and "Close".

Acceptance Challenges

**Communicating technical information to
decision-maker**

“We've always done it this way”

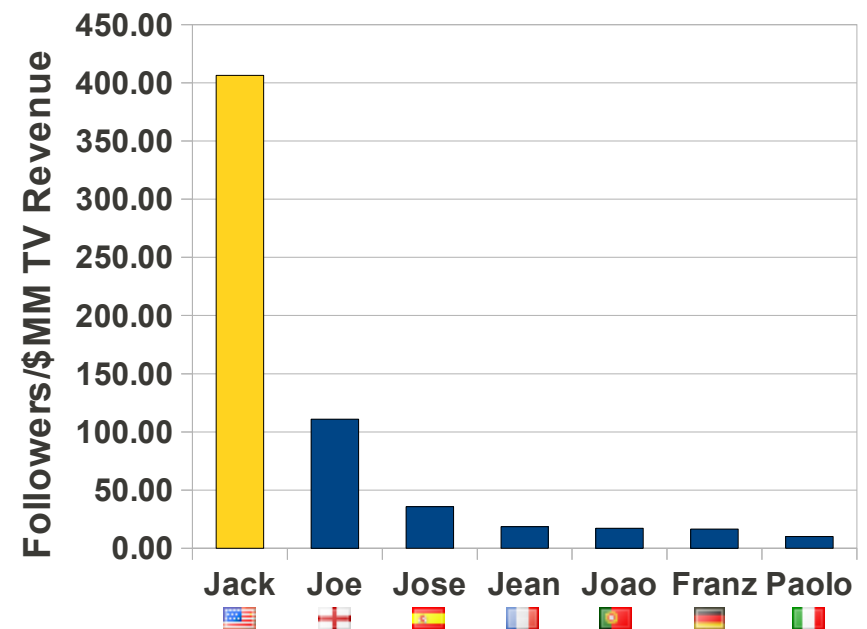
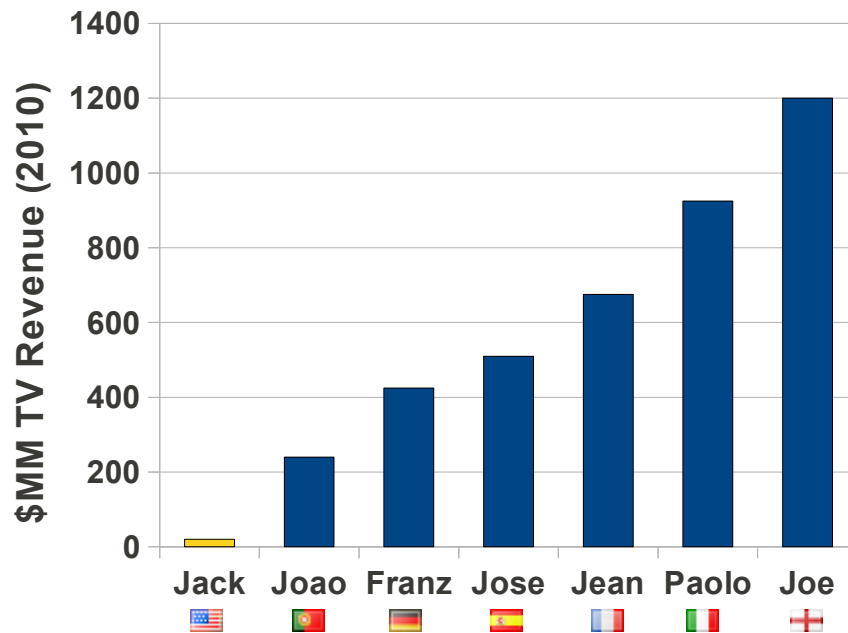
**“You can't explain everything by
statistics”**

**“What do a bunch of eggheads know
about football, anyway?”**

**“What do a bunch of Americans know
about football, anyway?”**

Interest vs. Money

Opta Sports' league-specific Twitter feeds



Source: OnFooty.com (Sarah Rudd)

Europe: Where the money is
USA: Where the stats culture is

Improving the Climate for Analytics

**Education process required for
analysts and end-users**

Customers don't always know what they
want vis-à-vis analytics

Analysts need to communicate ideas to
customers in non-technical language

Be open about the limitations

Danger of overselling

Soccer Analytics: Current State

Clubs have more in-match data

Current level of analysis:

Micro-level events
(tabulations/averages)

Video overlay

**Clubs use small
proportion of match data**



Soccer Analytics: Current State

Debate over utility of some metrics

Distance run over a match

Time of possession

Number of tackles

Goals-against average

**Difficult to develop metrics for
“non-glamour” positions**

Complex problem, slow progress

Soccer Analytics Blogs

Blog Title	Author	Location
Soccer by the Numbers	Chris Anderson	Ithaca, NY
On Football	Sarah Rudd	Seattle, WA
Soccer Statistically	Ford Bohrmann	Seattle, WA
11tegen11 (11 on 11)	?	Netherlands
Rational Football	?	Denmark

SoccerAnalysts.com

An aggregation of soccer analytics websites and blogs

Soccer Analytics Firms

Company	Location
StatDNA	Chicago, IL
Chimu Solutions	Chicago, IL
PowerStats	San Diego, CA
AIMFútbol	Santiago, Chile
Sports Statistical Reviews Ltd	Southampton, UK

Future of Soccer Analytics

Integration with other aspects of sports performance

Formation of a truly global transfer market



Developing a Sports Analytics Startup

Funding

Market

Product

Infrastructure

Network

First Client

But before you start...

Passion absolutely required!

Bootstrapping essential

Part-time vs. Full-time

“Market Value” vs. Reality

Interesting vs. Compelling

Exit? What exit??

Summary

Challenges in soccer analytics

Nature of the game

Traditional attitudes

Proceed from first principles

Be open

**The history of sports analytics
continues to be written**

Thank you!



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