



Joris Bekkers  
joris@unravelsports.com

## Work Experience



**Data Scientist**  
**U.S. Soccer Federation**  
June 2018 – Aug. 2019  
Chicago, IL  
Sep. 2019 – Now  
Breda, NL

Implementation and automation of federation wide football analytics infrastructure for national senior and youth teams using AWS, Python, R etc. Communication and analysis of complex models, player scouting and in-depth match-to-match opposition and self-analysis tools towards end-stakeholders (head coaches, assistants etc.) through state-of-the-art data analytics and visualizations, leveraging both on-ball event, and optical tracking data.



**Data Analytics Consultant**  
**AFC Bournemouth**  
Aug. 2017 – Dec. 2018  
Breda, NL

Initiation and creation of analytics infrastructure in collaboration and to the benefit of AFCB's owners and first team video and performance analysis team. Tasks included: creation of advanced algorithmic play style identification from on-ball event data, expected goals model, goalkeeper analysis and automated half-time reporting including data visualizations.

**Data Analytics Consultant**  
**UnravelSports (self-employed)**  
Nov. 2016 – Now

R&D of football related concepts using ball event and optical tracking data (pitch control, off ball scoring, pass motifs, scouting reports and mobile/web app development).

## Papers & Presentations

**Keynote at DfB Hackathon<sup>2</sup>**  
**Frankfurt, GER**  
Feb. 2020

*Practical Applications of Data in Football.*  
Keynote held for aspiring data scientists/engineers at the German Football Associations' 2<sup>nd</sup> hackathon.

**Pro License Course**  
**Kansas City, KS**  
Jan. 2019

*An introduction to Data in Soccer.* Presentation held for MLS, NWSL, USL and/or U.S. National Team Coaches as part of their top-level coaching degree.

**#OptaProSoccer**  
**Chicago, IL**  
Jan. 2019

*Player Pathways: A Data-Driven Approach.* Presentation on player pathways, progression analysis and providing youth coaches with data to track their players.

**MIT Sloan Sports Analytics Conference**  
**Boston, MA**  
March 2017

Bekkers, J. & Dabadghao, S. (2017). *Flow motifs in soccer: What can passing behavior tell us?*

## Education

### Eindhoven, University of Technology (NL)

Aug. 2014 – July 2017

### University of Applied Sciences 's-Hertogenbosch (NL)

Aug. 2009 – July 2014

### MSc Operations Management & Logistics

Relevant Courses: Stochastic Modeling, Statistics, Data Analysis, Data Visualization, Business Analytics, Simulation Modeling, Optimization, Game Theory, Network Theory, Queuing Theory, Finance, Business Process Management, Java Programming.

### BSc Civil Engineering

Relevant Skills: Systems Engineering, Design & Visualization of Construction Plans.

## Online Education

### Udemy.com

May 2020

The Complete 2020 Flutter Development Bootcamp with Dart/Flutter (mobile/web development).

### Udemy.com

Sept. 2019

Deep Learning: Recurrent Neural Networks in Python

### deeplearning.ai

April 2018

Neural Networks and Deep Learning  
Improving Deep Learning Neural Networks: Hyperparameter tuning, Regularization and Optimization  
Structuring Machine Learning Projects

## Public Projects

### UnravelSports App

March 2021

*Live tracking data on the bench?* A proof-of-concept multi-platform phone & tablet app (iOS/Android) to showcase the use of synchronized tracking data from a live-streamed data feed. Including real time pitch control.  
Google Play Store: [tinyurl.com/unravelsports-app](https://tinyurl.com/unravelsports-app)

## Relevant Skills

- Python (numpy, pandas, scipy, scikit-learn, matplotlib, keras, spektral, fastapi, pulp etc.)
- R (ggplot, dplyr etc.)
- Flutter/Dart (Android, iOS & Web Apps)
- SQL (Postgres, AWS Redshift)
- Git
- Docker
- Analytics process/pipeline/script optimization
- Amazon Web Services (Step Functions, Batch, s3, SageMaker etc.)
- Data Analysis, Data Visualization, Data Manipulation, Machine Learning
- Modeling and analysis of high frequency optical player tracking data (ChyronHego, Second Spectrum, STATS, SkillCorner etc.)
- Modeling on-ball event data (Opta, Instat, Statsbomb)
- Dutch (C2), English (C2), German (B1), Spanish (A2)

## ***Knowledgeable in***

- Linux
- Web development (HTML, css & d3)
- LaTeX
- HTML/CSS

## ***Other Interests***

Sports, Web3 & Blockchain, Chess, Cooking & Baking, Traveling, Anything Science, Math and Linguistics.