

# SPORT RATING SYSTEMS

AI Honours Programme 2014

Supervisor: Christian Schaffner, ILLC



- 18 teams
- two Round Robins (1 game at home, 1 away)

**STAND EREDIVISIE 2013/2014**

| Nr. | Club             | GW | W  | G  | V  | Pnt. | GD  | V-T   |
|-----|------------------|----|----|----|----|------|-----|-------|
| 1   | Ajax             | 34 | 20 | 11 | 3  | 71   | 41  | 69-28 |
| 2   | Feyenoord        | 34 | 20 | 7  | 7  | 67   | 36  | 76-40 |
| 3   | FC Twente        | 34 | 17 | 12 | 5  | 63   | 35  | 72-37 |
| 4   | PSV              | 34 | 18 | 5  | 11 | 59   | 15  | 60-45 |
| 5   | SC Heerenveen    | 34 | 16 | 9  | 9  | 57   | 21  | 72-51 |
| 6   | Vitesse          | 34 | 15 | 10 | 9  | 55   | 16  | 65-49 |
| 7   | FC Groningen     | 34 | 14 | 9  | 11 | 51   | 4   | 57-53 |
| 8   | AZ               | 34 | 13 | 8  | 13 | 47   | 4   | 54-50 |
| 9   | ADO Den Haag     | 34 | 12 | 7  | 15 | 43   | -19 | 45-64 |
| 10  | FC Utrecht       | 34 | 11 | 8  | 15 | 41   | -19 | 46-65 |
| 11  | PEC Zwolle       | 34 | 9  | 13 | 12 | 40   | -2  | 47-49 |
| 12  | SC Cambuur       | 34 | 10 | 9  | 15 | 39   | -10 | 40-50 |
| 13  | Go Ahead Eagles  | 34 | 10 | 8  | 16 | 38   | -24 | 45-69 |
| 14  | Heracles Almelo  | 34 | 10 | 7  | 17 | 37   | -14 | 45-59 |
| 15  | NAC Breda        | 34 | 8  | 11 | 15 | 35   | -11 | 43-54 |
| 16  | RKC Waalwijk     | 34 | 7  | 11 | 16 | 32   | -20 | 44-64 |
| 17  | NEC              | 34 | 5  | 15 | 14 | 30   | -28 | 54-82 |
| 18  | Roda JC Kerkrade | 34 | 7  | 8  | 19 | 29   | -25 | 44-69 |

# WHAT IF SEASON ENDED NOW?

| STAND EREDIVISIE |                 |    |   |   |   |      |    |      |
|------------------|-----------------|----|---|---|---|------|----|------|
| Nr.              | Club            | GW | W | G | V | Pnt. | GD | V-T  |
| 1                | PSV             | 3  | 3 | 0 | 0 | 9    | 9  | 12-3 |
| 2                | PEC Zwolle      | 3  | 3 | 0 | 0 | 9    | 4  | 6-2  |
| 3                | Ajax            | 3  | 2 | 0 | 1 | 6    | 3  | 8-5  |
| 4                | FC Groningen    | 3  | 2 | 0 | 1 | 6    | 0  | 6-6  |
| 5                | FC Utrecht      | 3  | 2 | 0 | 1 | 6    | 0  | 4-4  |
| 6                | SC Cambuur      | 3  | 1 | 2 | 0 | 5    | 1  | 4-3  |
| 7                | Excelsior       | 3  | 1 | 1 | 1 | 4    | -1 | 4-5  |
| 8                | ADO Den Haag    | 3  | 1 | 1 | 1 | 4    | 2  | 5-3  |
| 9                | SC Heerenveen   | 3  | 1 | 1 | 1 | 4    | 1  | 4-3  |
| 10               | FC Dordrecht    | 3  | 1 | 1 | 1 | 4    | 0  | 3-3  |
| 11               | Feyenoord       | 3  | 1 | 1 | 1 | 4    | 0  | 3-3  |
| 12               | FC Twente       | 3  | 0 | 3 | 0 | 3    | 0  | 4-4  |
| 13               | Willem II       | 3  | 1 | 0 | 2 | 3    | 0  | 5-5  |
| 14               | AZ              | 3  | 1 | 0 | 2 | 3    | -2 | 4-6  |
| 15               | NAC Breda       | 3  | 0 | 2 | 1 | 2    | -5 | 3-8  |
| 16               | Go Ahead Eagles | 3  | 0 | 1 | 2 | 1    | -2 | 4-6  |
| 17               | Vitesse         | 3  | 0 | 1 | 2 | 1    | -4 | 4-8  |
| 18               | Heracles Almelo | 3  | 0 | 0 | 3 | 0    | -6 | 1-7  |



- ~120 teams
- 12-14 games **per season**

# SPORT RATING SYSTEMS

- analyze the results of sports competitions to provide **objective ratings** for each team.
- in some sports, the results tell us more than winner / loser

# RESEARCH OBJECTIVES

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- | . understand the mathematics and rationale behind different sport rating systems such as
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1. **understand the mathematics and rationale** behind different sport rating systems such as
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  - ELO rating system (used in Chess).

2. **visualize** the rating systems with meaningful graphics

# APPROACH

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- read and understand the relevant **mathematical literature**

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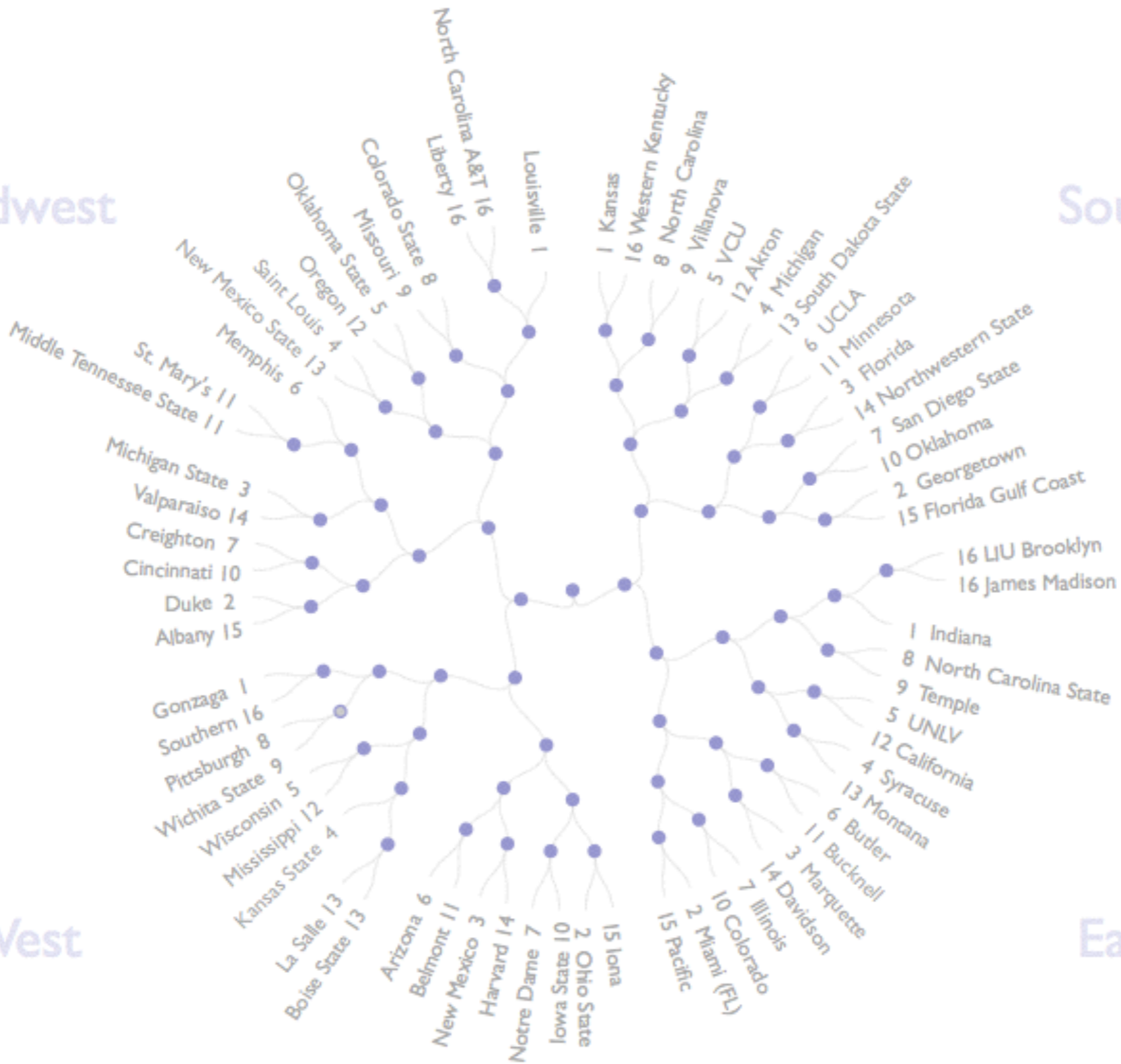
- read and understand the relevant **mathematical literature**
- use **graphical libraries** such as D3.js in order to come up with instructive **interactive graphs** to illustrate how the rating has been computed.

# APPROACH

- read and understand the relevant **mathematical literature**
- use **graphical libraries** such as D3.js in order to come up with instructive **interactive graphs** to illustrate how the rating has been computed.
- **write a report** describing the design choices and the findings.

Midwest

South



West

East