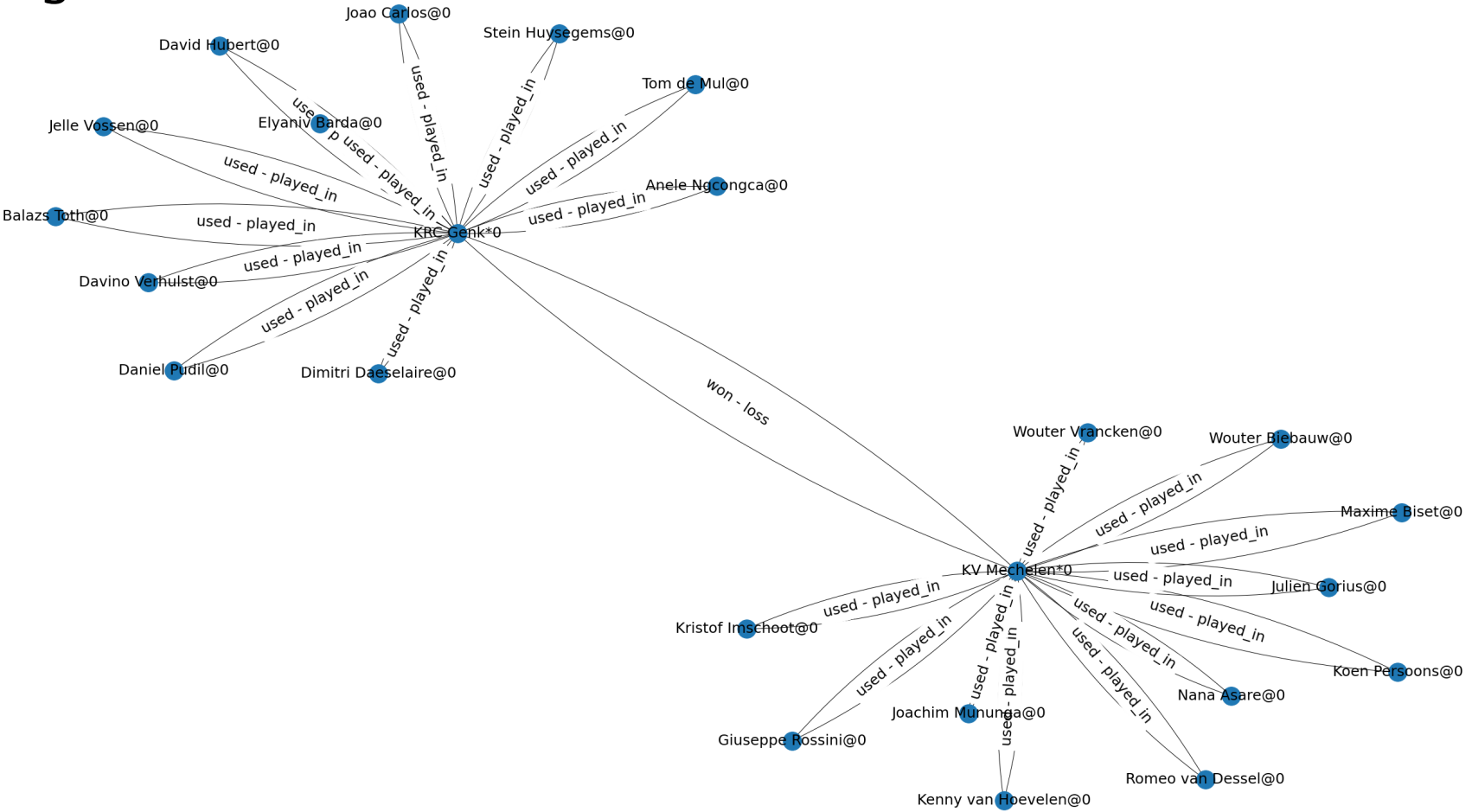
SportsGNN

A Sports Match Outcome Prediction Deep Graph Network

01 How it works?

Graph Structure

A single Match



Graph Structure

Multiple Matches

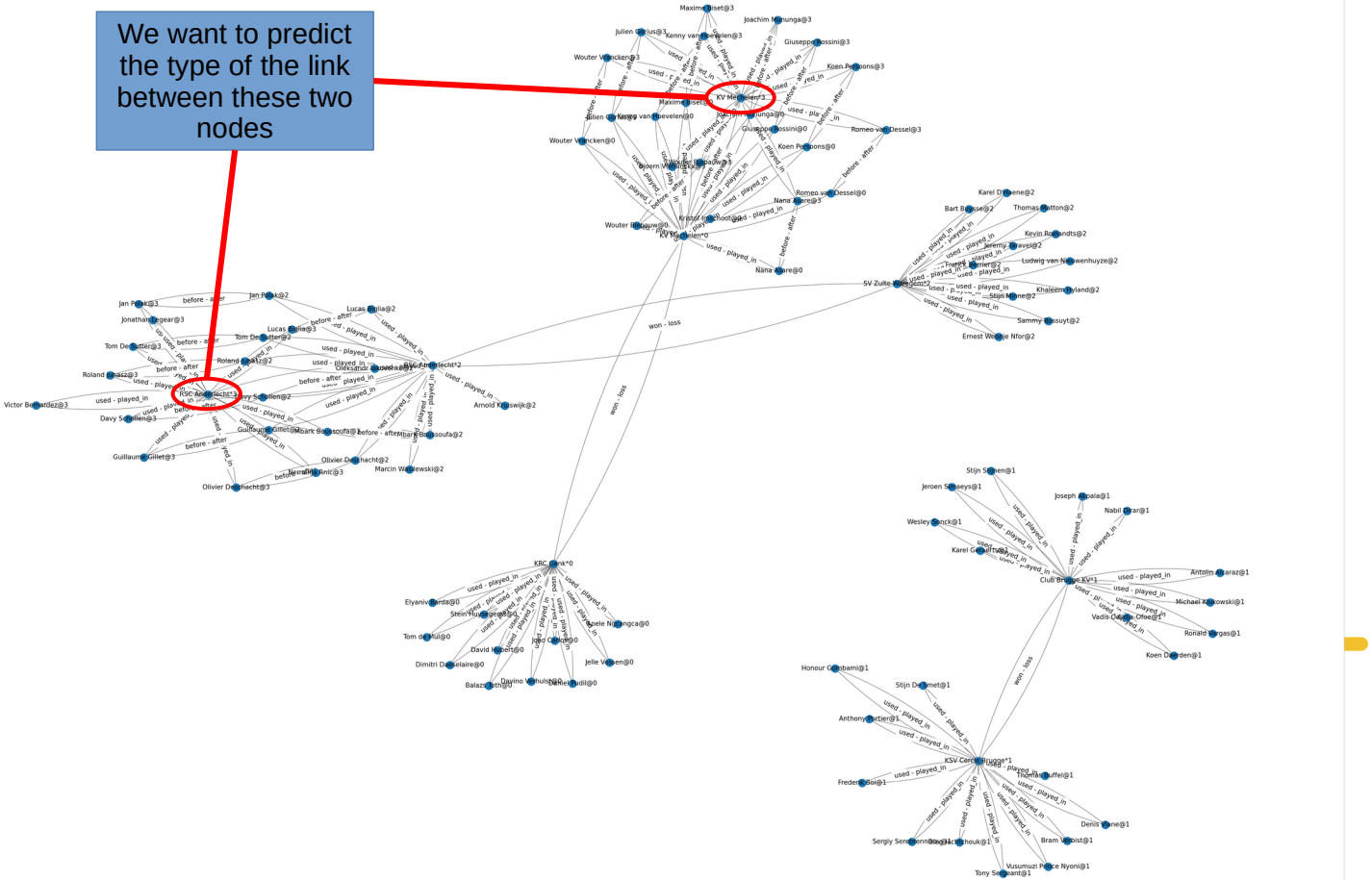
Consider the following Data-frame,
Lets say we want to predict the outcome of the 4’th row.
We create a Heterogeneous Spatiotemporal graph as shown in the next page

	league	season	week	home_team	away_team	result	home_lineup	away_lineup
0	Belgium Jupiler League	2008/2009	24	KV Mechelen	KRC Genk	win	[Wouter Biebauw, Kenny van Hoevelen, Nana Asar...	[Davino Verhulst, Joao Carlos, Dimitri Daesela...
1	Belgium Jupiler League	2008/2009	25	KSV Cercle Brugge	Club Brugge KV	loss	[Bram Verbist, Denis Viane, Anthony Portier, F...	[Stijn Stijnen, Michael Klukowski, Antolin Alc...
2	Belgium Jupiler League	2008/2009	25	RSC Anderlecht	SV Zulte-Waregem	win	[Davy Schollen, Olivier Deschacht, Arnold Krui...	[Sammy Bossuyt, Karel D'Haene, Stijn Minne, Ba...
3	Belgium Jupiler League	2008/2009	26	KV Mechelen	RSC Anderlecht	win	[Wouter Biebauw, Kenny van Hoevelen, Nana Asar...	[Davy Schollen, Olivier Deschacht, Roland Juha...

Graph Structure

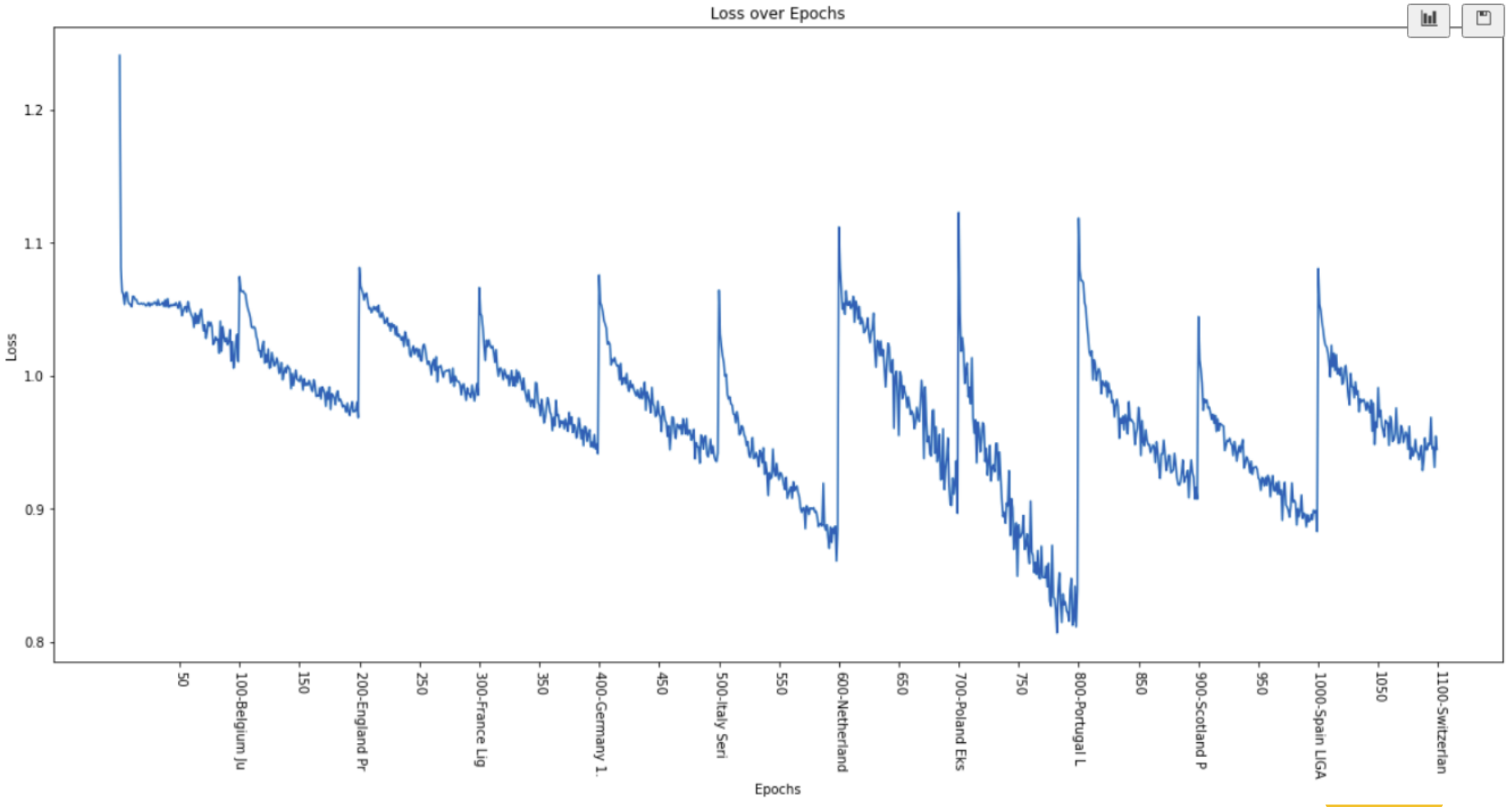
Multiple Matches (try zooming)

The exact method of our work will be explained orally, as its explanation in this presentation can cause misunderstandings and vagueness.

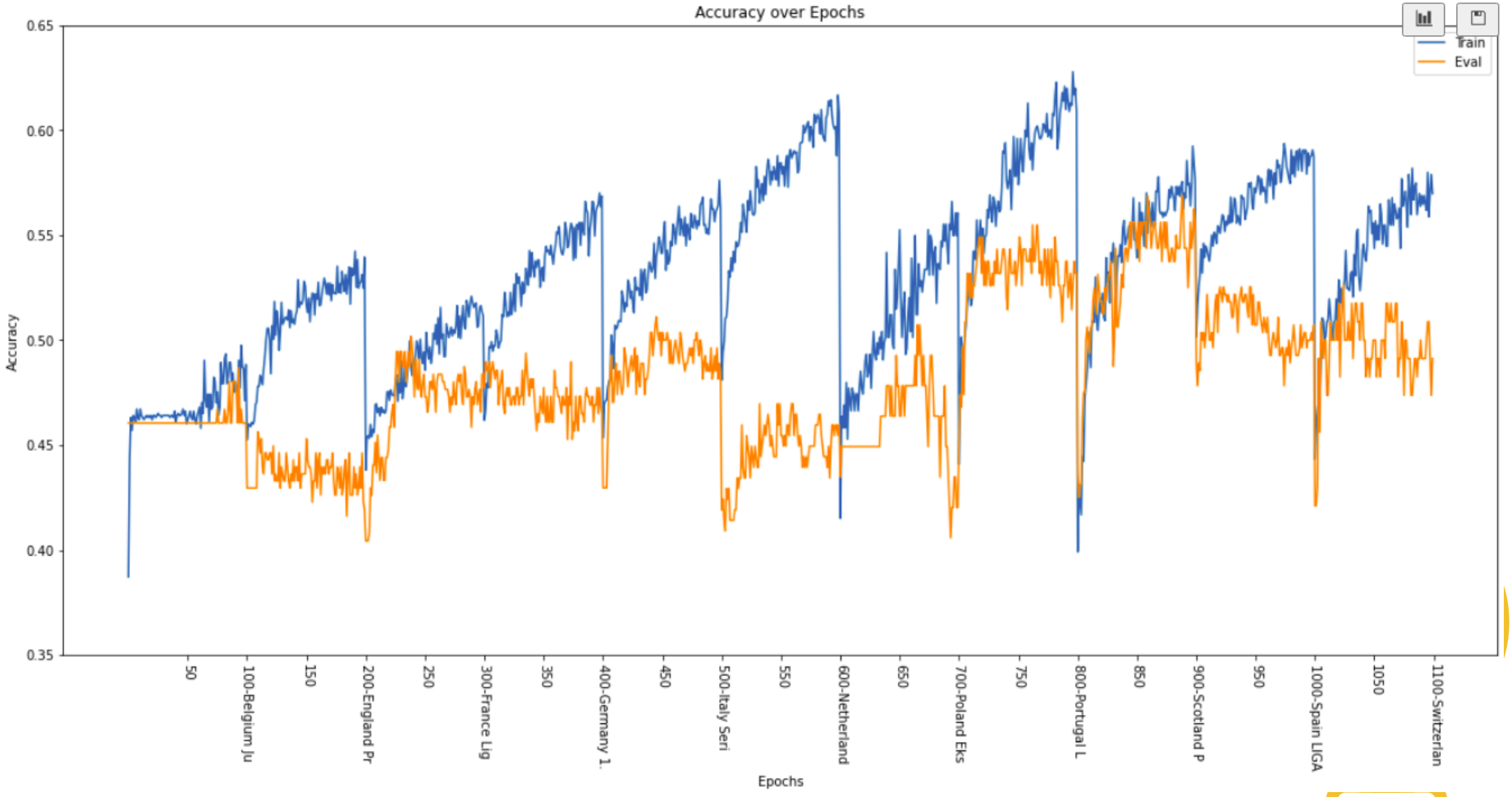


02 Results

Loss


Loss over Epochs
Loss
1.2
1.1
1.0
0.9
0.8
50
100-Belgium Ju
150
200-England Pr
250
300-France Lig
350
400-Germany 1.
450
500-Italy Seri
550
600-Netherland
650
700-Poland Eks
750
800-Portugal L
850
900-Scotland P
950
1000-Spain LIGA
1050
1100-Switzerlan
Epochs

Accuracy


Accuracy over Epochs
Train
Eval
Accuracy
0.65
0.60
0.55
0.50
0.45
0.40
0.35
50
100-Belgium Ju
150
200-England Pr
250
300-France Lig
350
400-Germany 1.
450
500-Italy Seri
550
600-Netherland
650
700-Poland Eks
750
800-Portugal L
850
900-Scotland P
950
1000-Spain LIGA
1050
1100-Switzerlan
Epochs

Baseline Comparison

We have exceeded the baseline in almost every league, but this model is not perfect and it certainly a work in progress.