DOTA2
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Quick review

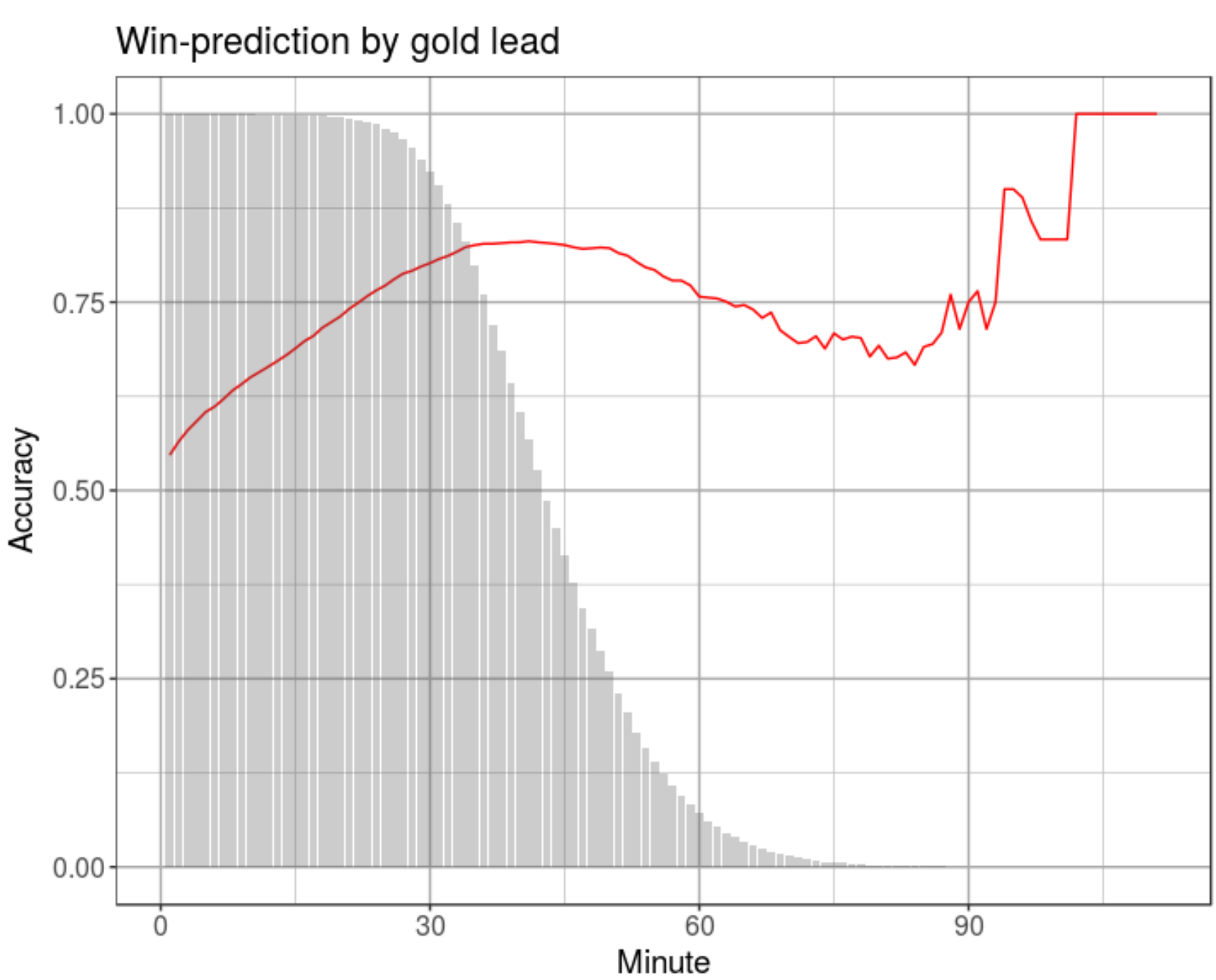
- Dataset: 50.000 games of Dota2, a competitive multiplayer online game
  - 18 different .csv files
  - Many different data types

- Results from the last presentation:

  - Leading in gold is highly relevant to win the game, but gets less relevant for very long games

  - Simple win-prediction only using the gold lead of a team

  - Word-clouds of the chat to investigate differences between winning and losing teams

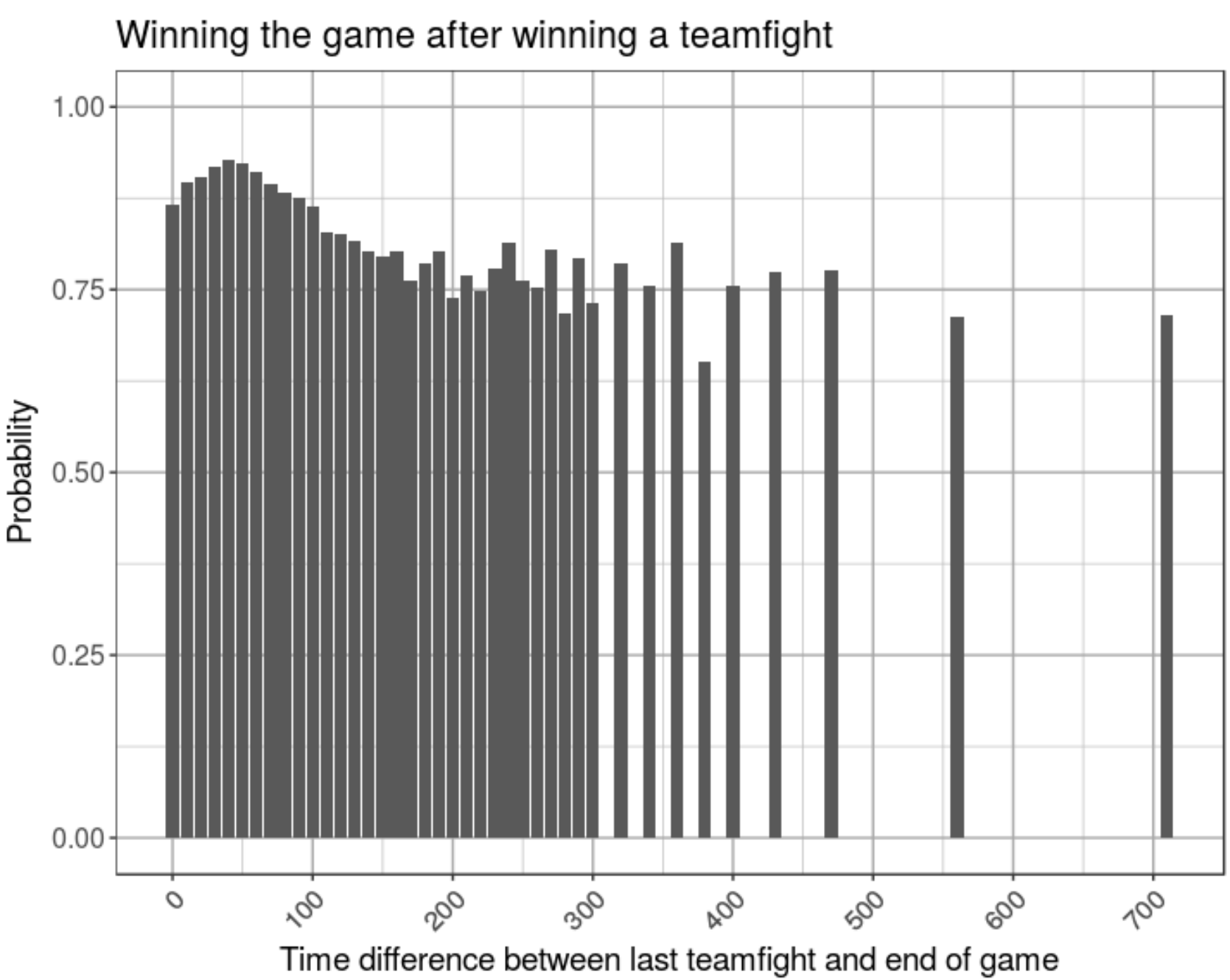

Win-prediction by gold lead
1.00
0.75
0.50
0.25
0.00
Accuracy
0
30
60
90
Minute

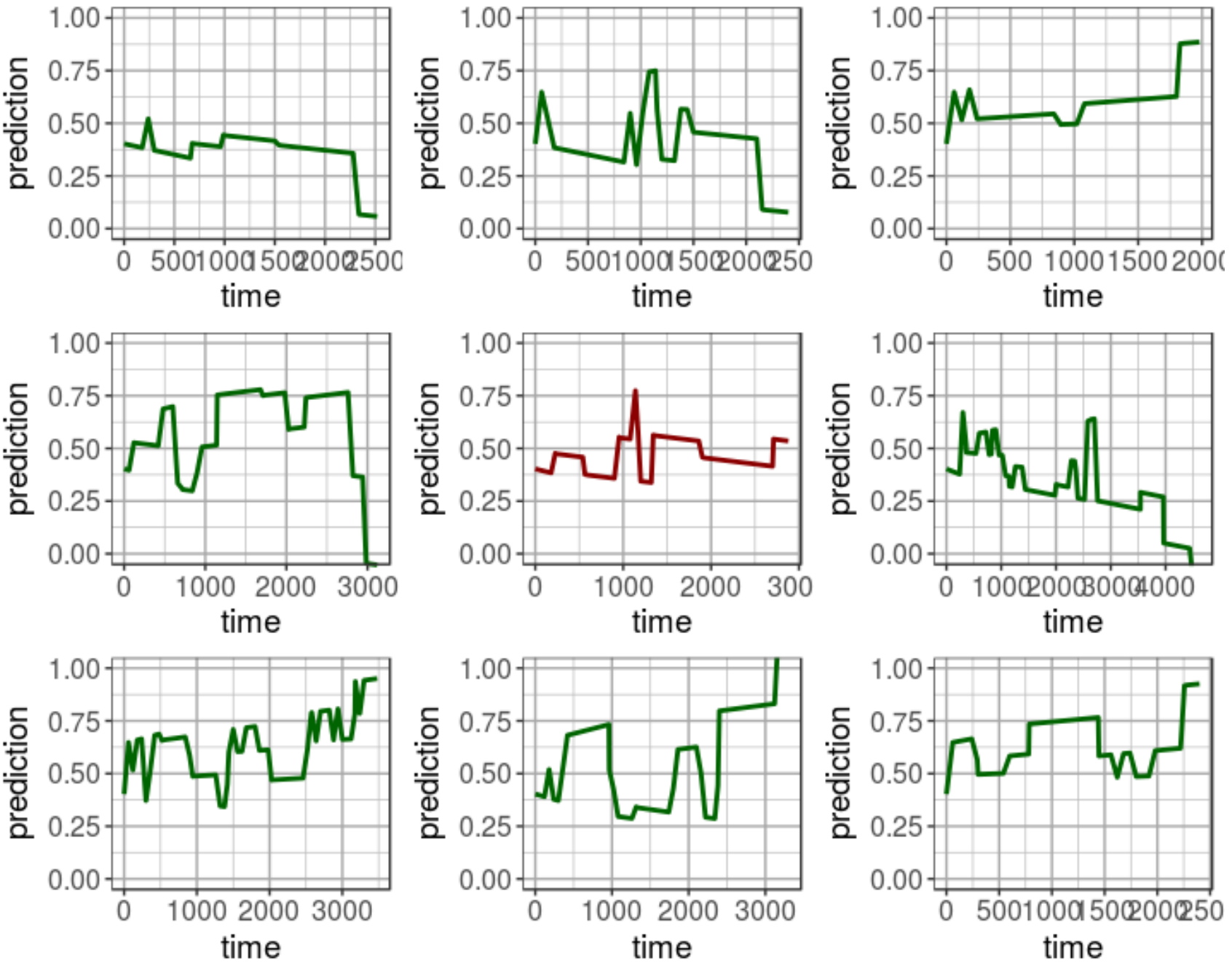
Progress since

- Investigation of the teamfight data
  - Dota2 is a team game, and teamwork is very important for success
  - Teamfights should therefore be highly relevant for the outcome of a game
  - Teamfights get more important for the game outcome as the game progresses
    => Combine gold and teamfights to get better predictions

  - This leads to some questions:
    - Do winning teams win the last teamfight?
      Answer: 88% of teams do.
    - How relevant is this number, and how does it evolve over time?
      Answer: Plot on the next slide

- Combine both gold and teamfights to predict games
  - Simple linear models on the gold and teamfight data
  - Combination of those predictions (currently the mean, but work in progress)
  - Result: Predictions for each minute of a game
  - Accuracy: 97.92%


Winning the game after winning a teamfight
1.00
0.75
0.50
0.25
0.00
Probability
0
100
200
300
400
500
600
700
Time difference between last teamfight and end of game


prediction
time
1.00
0.75
0.50
0.25
0.00
0
500
1000
1500
2000
2500
3000
4000

Further Progress

- Use better models than just linear regression
  - LSTM to keep game-history relevant ?

- Work on the general programm architecture
  - Is it feasible to combine all data in a large dataset? Only if discretizing times
  - Should I stay in this modularized form?
  - If yes, how do they communicate? So far by processing each independently

- Think about my data
  - Do I need to format the full dataset or am I fine with what I have?