TV Ratings Prediction with Time Weighting Based Regression

Master Thesis Defense

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Agenda

1. Thesis Goal: Solve the Problem of TV Ratings Prediction
2. Solution: Time Weighting Based Regression (TWR)
3. Related Work
4. Experiments
5. Conclusion

Thesis Goal: Solve the Problem of TV Ratings Prediction

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What is TWR?

Why TWR?

How does TWR work?

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TV Ratings Prediction

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Data Set

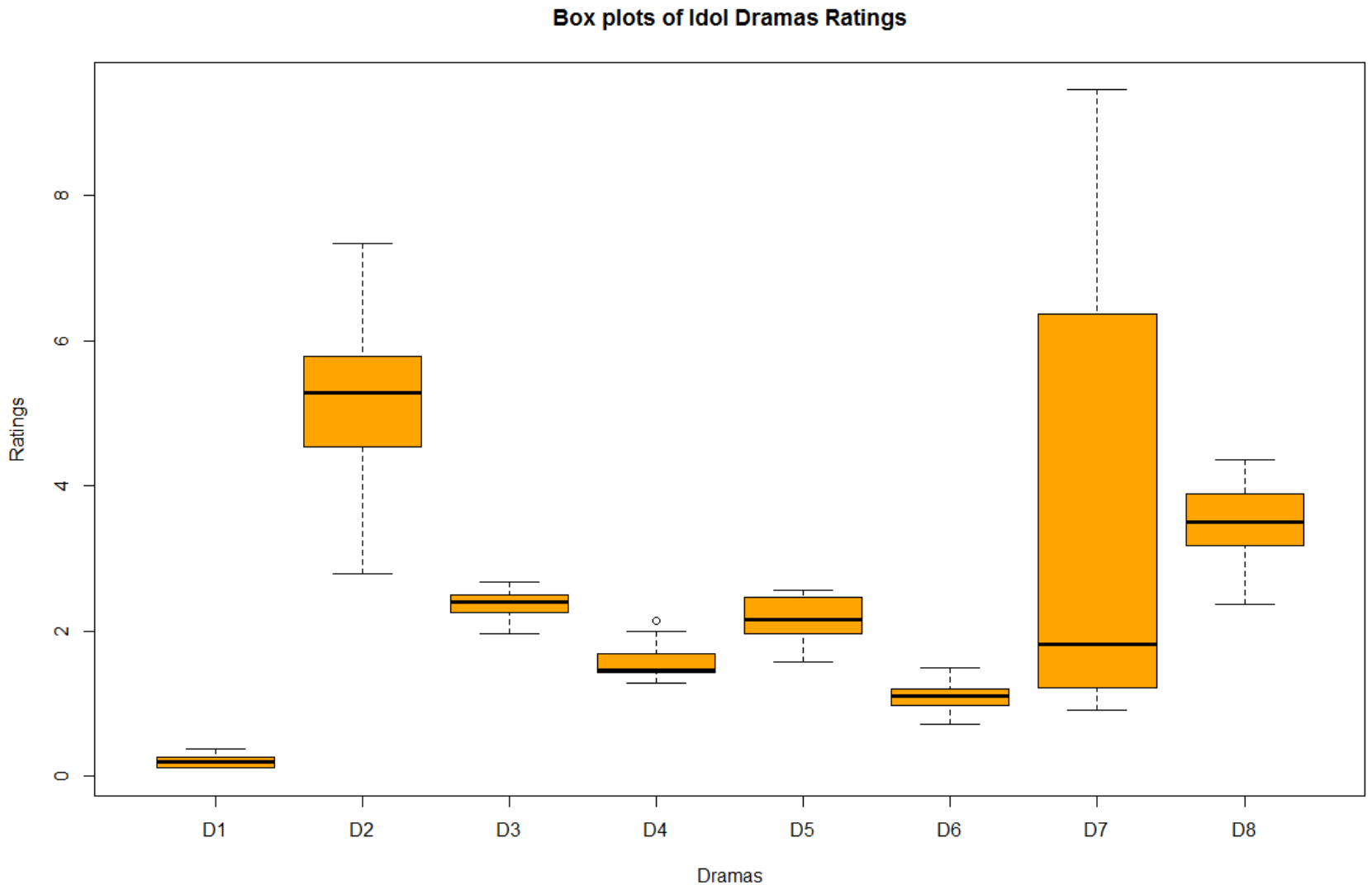

Figure 1: Box plots of ratings

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Code example

```
if (weight_type == 'equal') {
  # this is known as bagging
  case_weights <- rep(1 / num_cases, num_cases)
} else if (weight_type == 'linear') {
  case_weights <- seq(1, num_cases)
} else if (weight_type == 'exp') {
  case_weights <- exp(1:num_cases)
} else if (weight_type == 'exp3') {
  alpha <- 3
  case_weights <- (exp(1)^alpha)^(1:num_cases)
} else {
  # decide weight type automatically via validation error
}
```