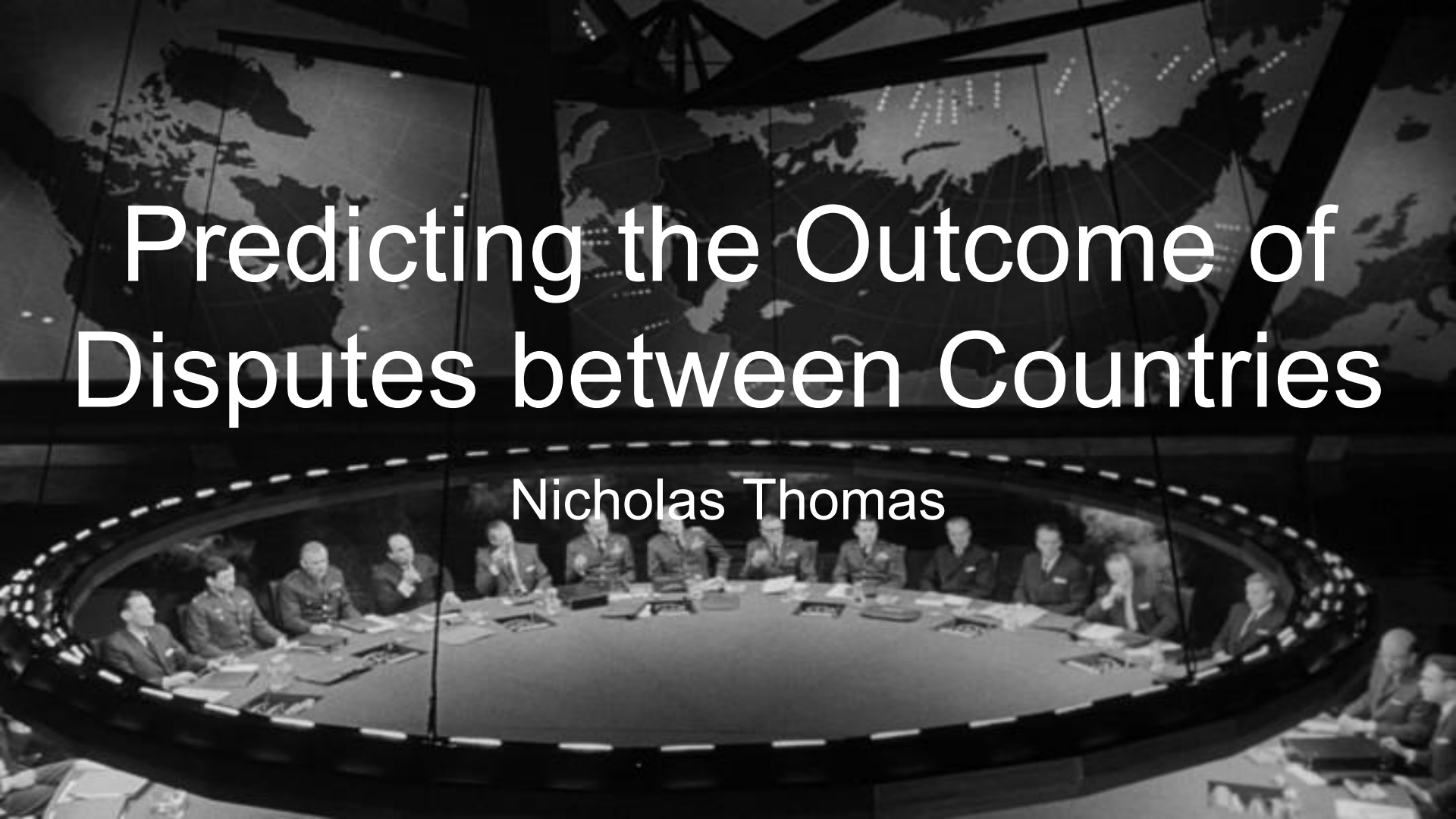


Predicting the Outcome of Disputes between Countries

Nicholas Thomas



How does it all end?



Predicting Dispute

- Disputes can easily spiral out of control
- How can we tell where a dispute is headed?



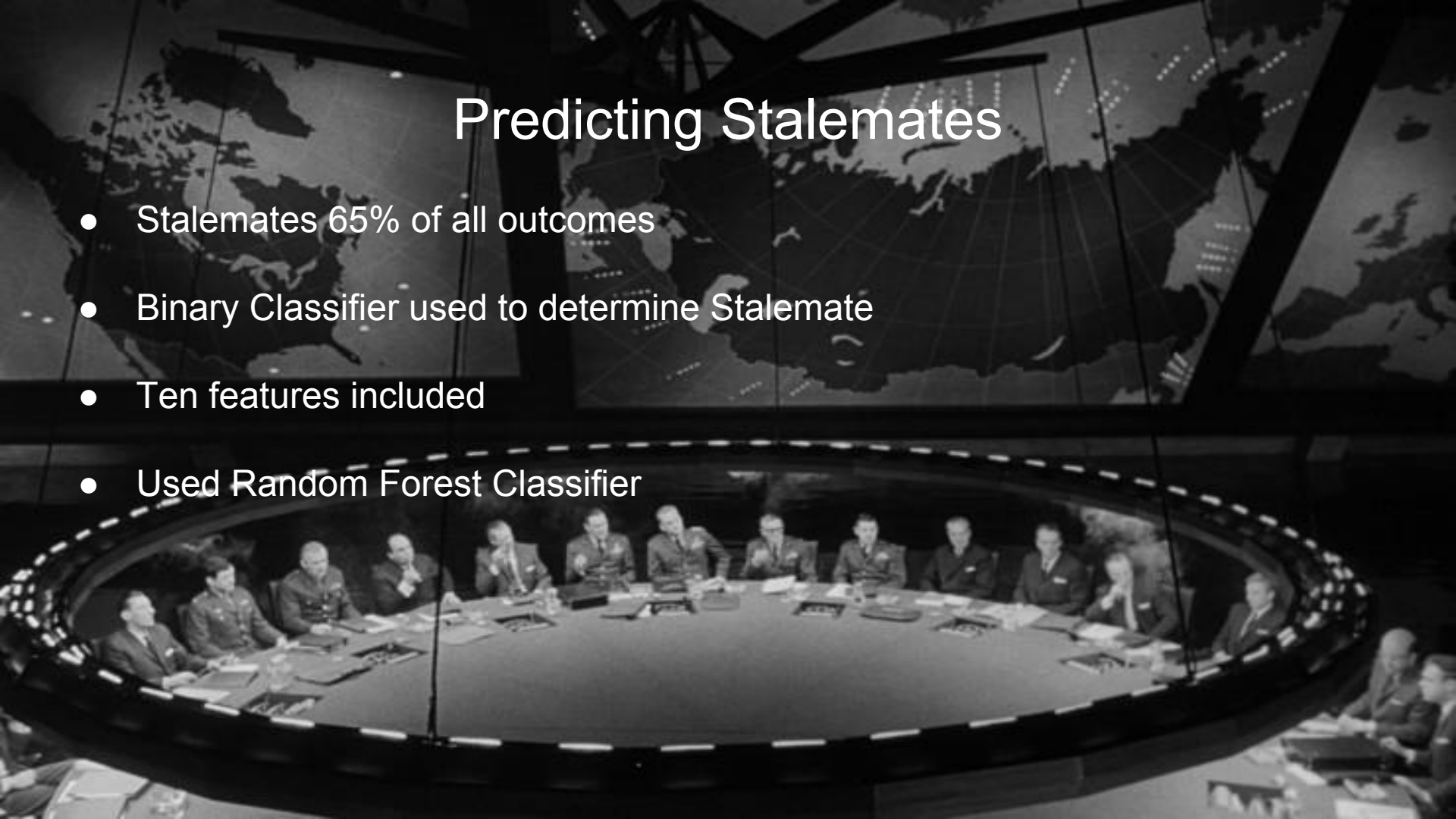
Data and Tools

- Militarized Interstate Disputes(MID) dataset
- SKLearn
- Flask
- PSQL

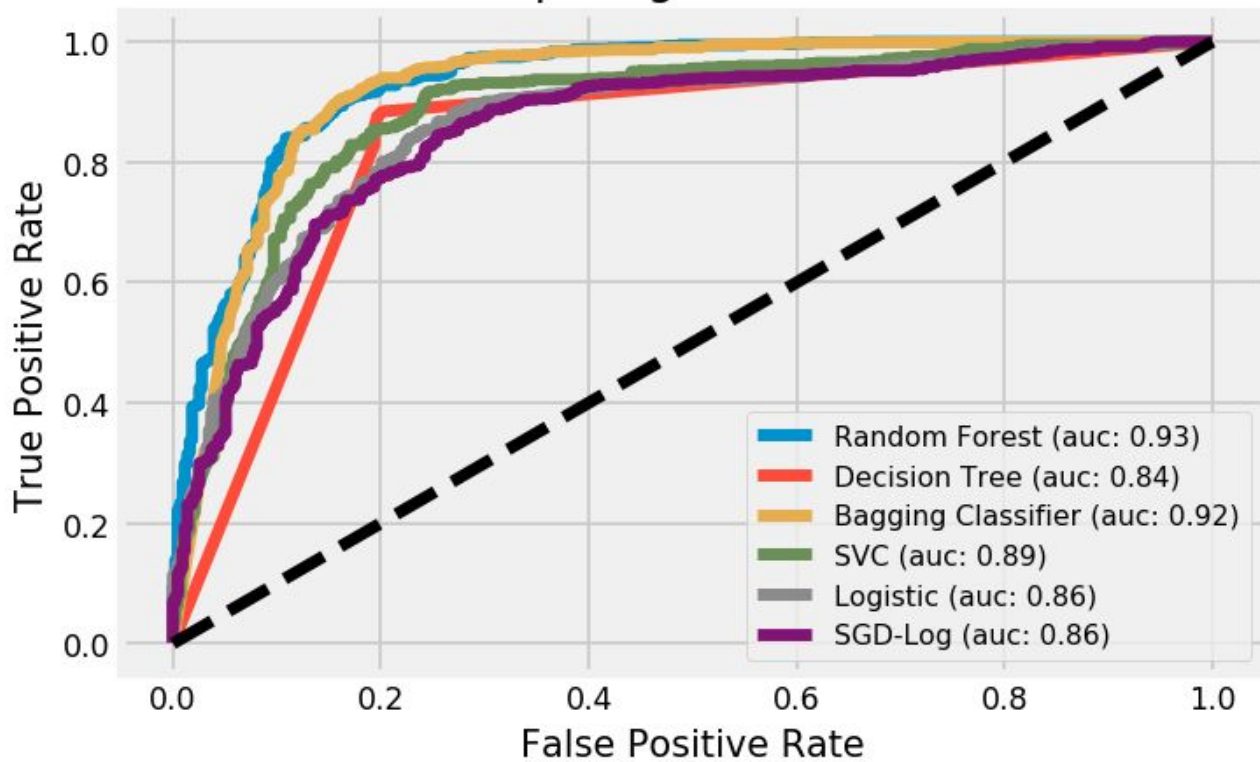


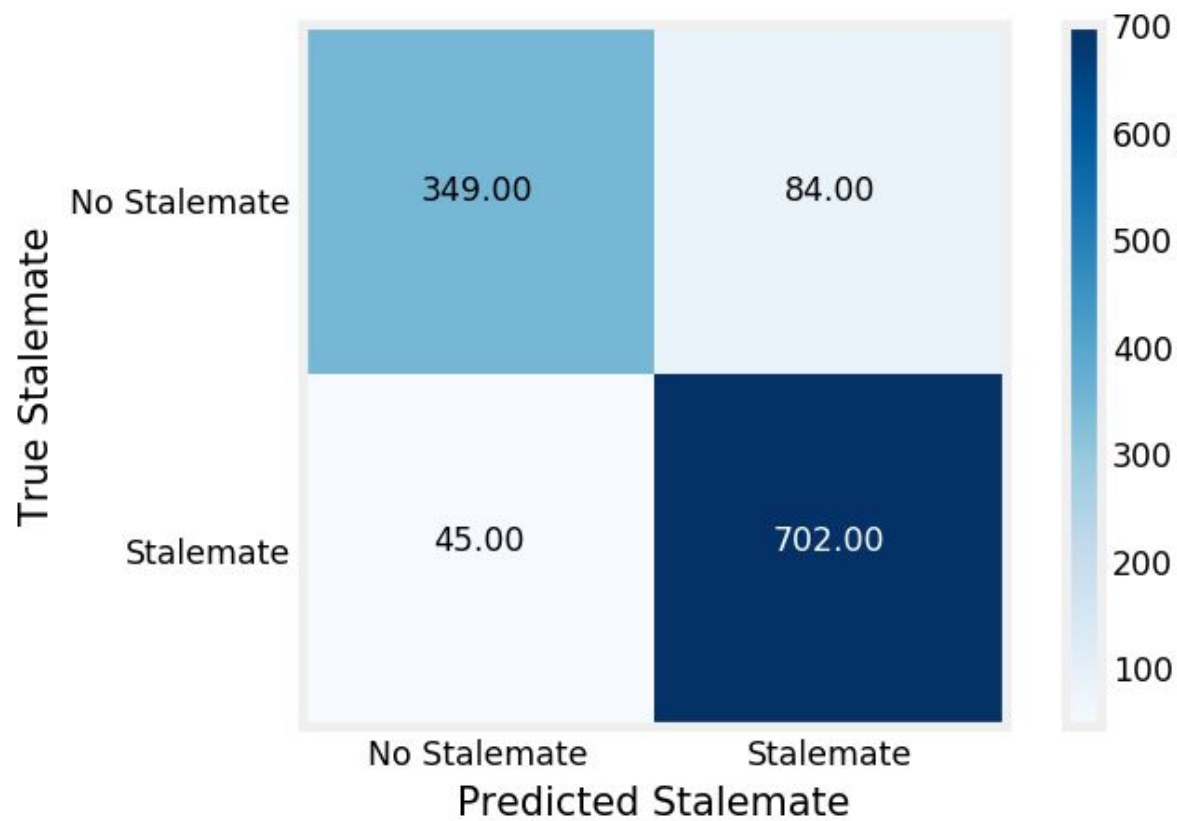
Predicting Stalemates

- Stalemates 65% of all outcomes
- Binary Classifier used to determine Stalemate
- Ten features included
- Used Random Forest Classifier



Comparing ROC Curves



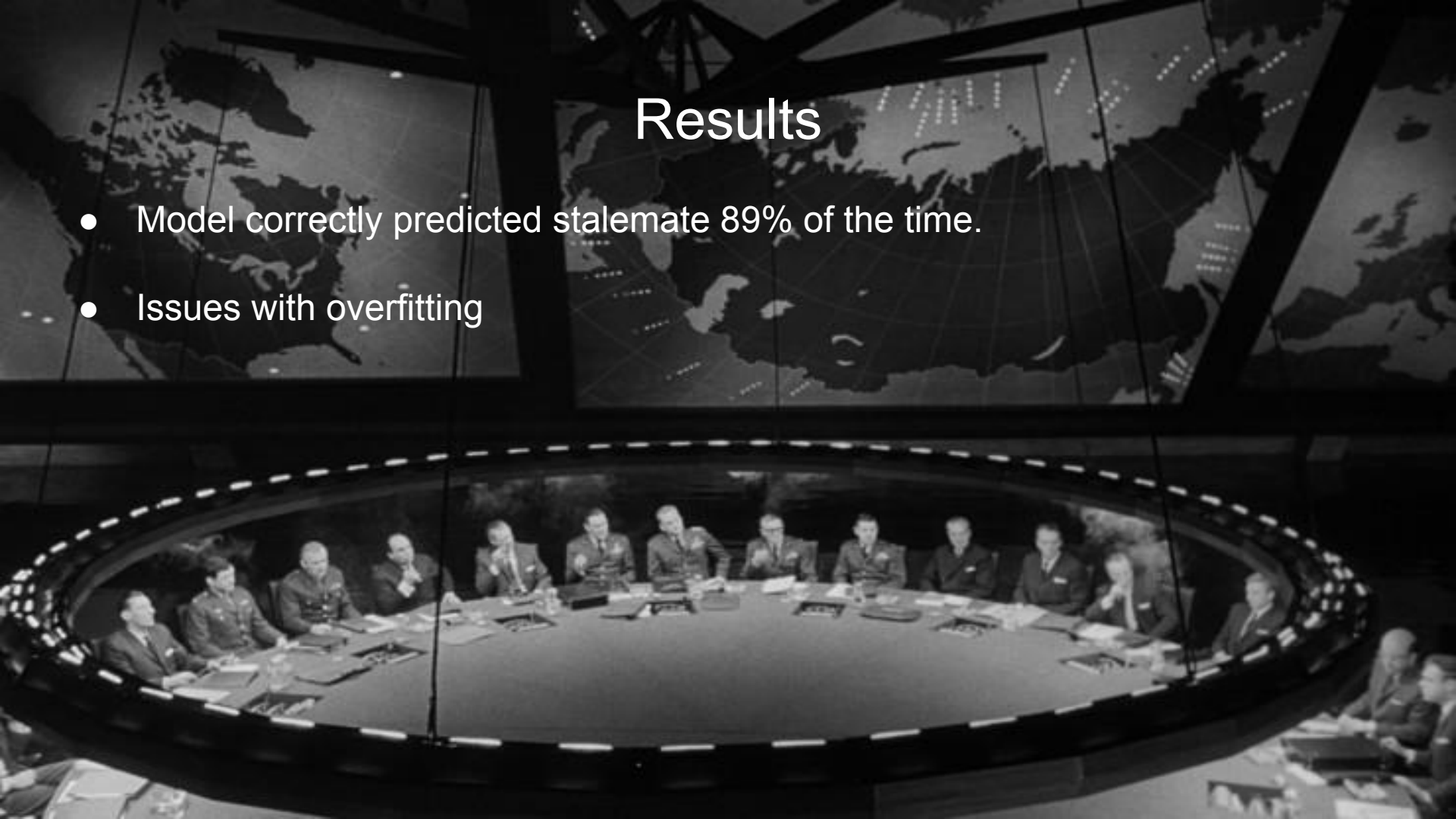


Following Germany's defeat in WW II, the Soviets blockade West Berlin to bring it into the Soviet sphere of influence.
Predicted Outcome: A stalemate between the US and Soviet Union.
Outcome: Outcome is listed as a stalemate between the US and Soviets.



Results

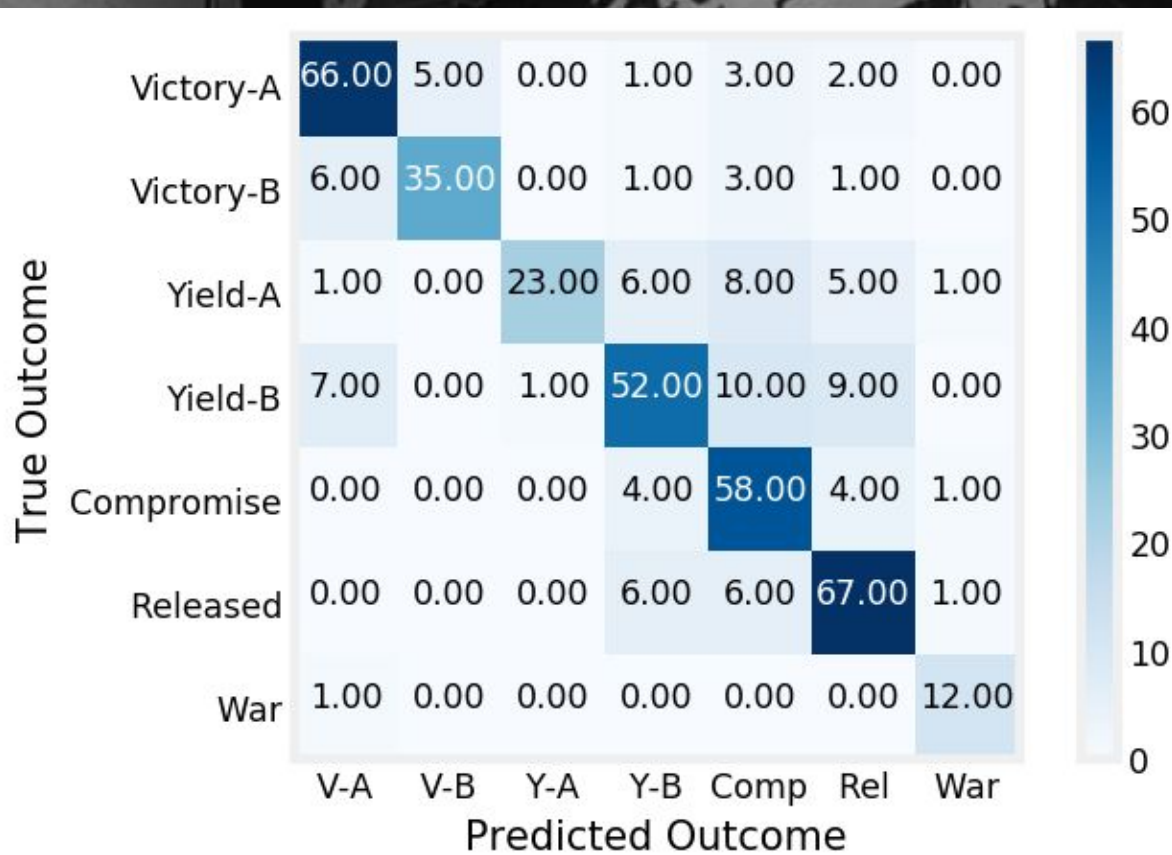
- Model correctly predicted stalemate 89% of the time.
- Issues with overfitting



Predicting all other Outcomes

- Model was used to predict the other outcomes
- Same features were used
- Used Random Forest





Results

- Correctly predicted outcome 77% of the time
- Still some overfit



In 1863, a series of military engagements by the US, UK, France, and the Netherlands against the Japanese feudal domain of Choshu.
Predicted Outcome: Coalition Victory
Outcome: Coalition Victorious



In 1997, Canada seized four American fishing vessels after negotiations over salmon fishing quotas broke down.

Predicted Outcome: Canada wins the US-Canada war of 1997

Outcome: Canada released the vessels after the American captains paid a fine



Conclusion

- Both models good at making predictions
- More data needed for non-stalemate outcomes
- Underlying flaws in data set



Thank You

Questions?

