Will a bill pass the Illinois legislature?
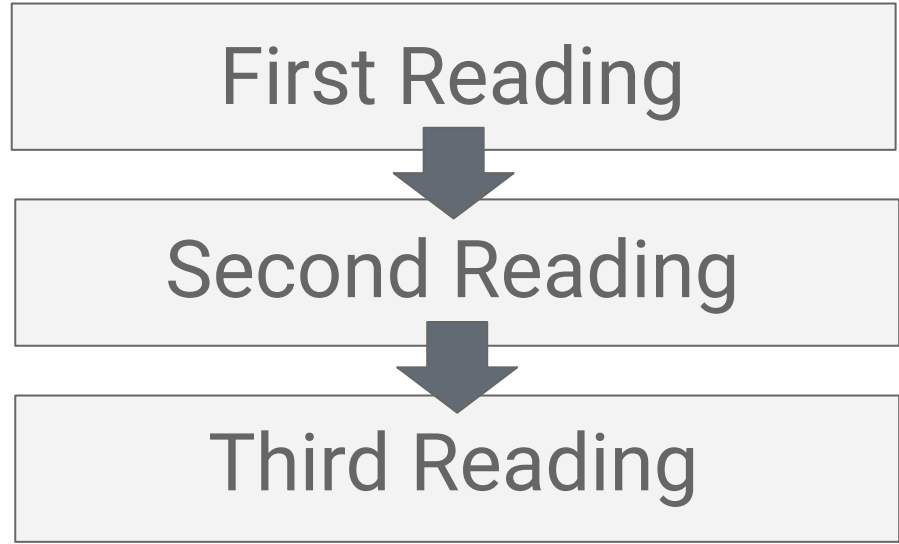
By Willy Raedy

- Senator introduces a bill

First Reading

– Bill makes it out of committee

First Reading

Second Reading

- Senate votes on the bill

First Reading

↓

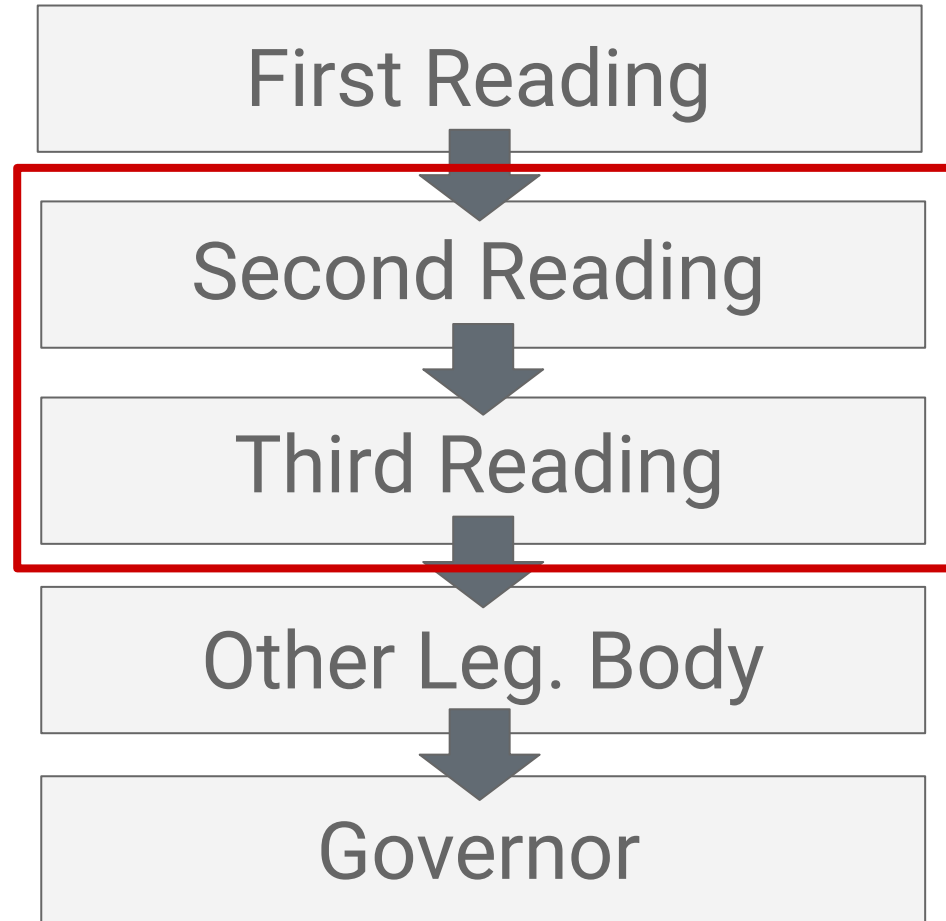Second Reading

↓

Third Reading

First Reading

↓

Second Reading

↓

Third Reading

↓

Goes to House

↓

Governor

- Limit to Democratic bills

- 20% of bills fail this step

First Reading

Second Reading

Third Reading

Other Leg. Body

Governor

Data

Bill (readings, subject, cost)

Legislative (co-sponsors, bipartisan)

Author (years in office, fundraising)

Community (hearings, witness slips)

Data

Bill	(readings, ~~subject, cost~~)	LEGISCAN *Bringing People To The Process*
Legislative	(co-sponsors, bipartisan)	LEGISCAN *Bringing People To The Process*
Author	(years in office, fundraising)	BALLOTPEDIA
Community	(hearings, witness slips)	Illinois General Assembly

Model

Legislative

Author

Community

x1

x2

x2

Weighted Average

Final Prediction

Model

Legislative	Author	Community
x1	x2	x2

Weighted Average

Final Prediction
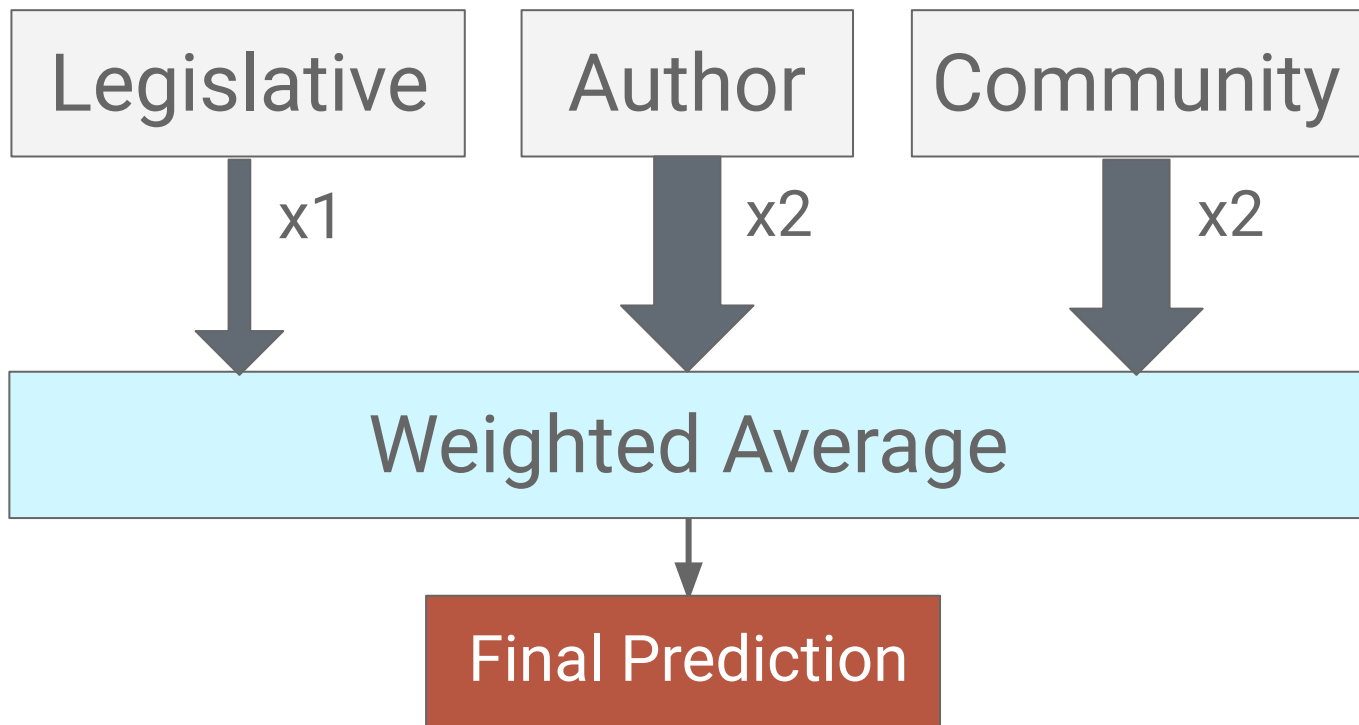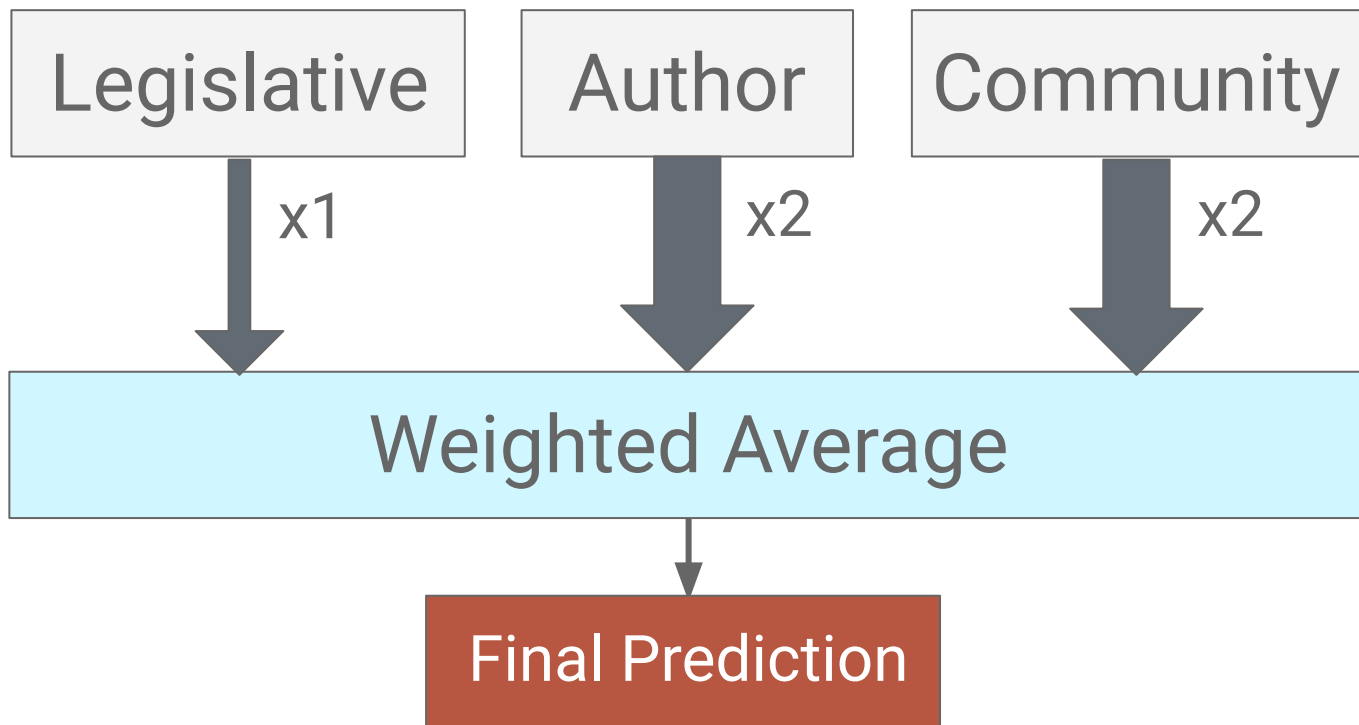
Metrics

- ROC: 0.68
- Acc: 54%
- Prec: 92%
- Rec: 48%

Not highly likely. However, 80% of bills get a vote so there is still a good chance.

Number of Co-sponsors: 2

0	5	10	15	20

Has a Republican Co-Sponsor?

Number of Witness Slips: 5

0	20	40	60	80	100

Percent Supporting: 80

0	20	40	60	80	100

Who is the author?: Don Harmon

Model

Model	Feature	Change in Odds	Key Threshold	Relative Importance
Author	Funding Level	--50%		
	Is Comm. Chair	--33%		
	Num. Terms	--25%		
Hearing	Num. Slips		< 5	50%
	Perc. Support		> 97%	50%
Legislature	Num. Co-sponsors	--2%		
	Bipartisan?	+10%		

Take Aways

- Model finds "trivial" bills
    - Correct: 4.6 (+/- 10) nay votes
    - Missed: 8 (+/- 15) nay votes

- Not all bills are equal

- Confident in "Yes" predictions

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- Limited causal value
    - Even small amounts of near unanimous support is impactful
    - Bipartisan support helps

Questions?