MATH 574– Bayesian Computational Statistics
Project Proposal

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Project Topic: Game of Thrones prediction of point of view of characters.

Problem Statement:

Game of Thrones is a very renowned fantasy series which follows the book series "A Song of Ice and Fire" by George R.R Martin. The show, however, diverted from the books in a couple of last series, the main reason being that the last book of the series is not yet published and it is still in the writing phase. Many of the fans found the ending of the series quite disappointing, and are now waiting for the book to be published to read about the ending from the book series perspective. Our project is based on predicting the chapters that will be written by the point of view of specific characters in the books. This will, in turn, give more insight into the character persistence in the series.

Data Sources:

The Data is obtained from a french fansite of Game of thrones and consists of a matrix with 24 rows and 5 columns, one column for each of the book and one row for the main characters in the series. The data is given by the following table.

character	AGOT	ACOK	ASOS	AFFC	ADWD
Eddard	15	0	0	0	0
Catelyn	11	7	7	0	0
Sansa	6	8	7	3	0
Arya	5	10	13	3	2
Bran	7	7	4	0	3
Jon Snow	9	8	12	0	13
Daenerys	10	5	6	0	10
Tyrion	9	15	11	0	12
Theon	0	6	0	0	7
Davos	0	3	6	0	4
Samwell	0	0	5	5	0
Jaime	0	0	9	7	1
Cersei	0	0	0	10	2
Brienne	0	0	0	8	0
Areo	0	0	0	1	1
Arys	0	0	0	1	0
Arianne	0	0	0	2	0
Asha	0	0	0	1	3
Aeron	0	0	0	2	0
Victarion	0	0	0	2	2
Quentyn	0	0	0	0	4
Jon Connington	0	0	0	0	2
Melisandre	0	0	0	0	1
Barristan	0	0	0	0	4

Project Outline:

The first step in our project will be representing the data in a correct csv format. This will be followed by importing the data and applying the specific Bayesian modeling techniques to evaluate and draw predictions from data. At the end, we will add data visualization tools to visualize the output of our model for each given character in the point of view table.

Modeling Techniques:

We will use a hierarchical model to predict the outcome. The point of view chapters will follow a Poisson distribution followed by a normal distribution for the parameter of the given Poisson distribution.