

Automatic Essay Evaluation

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To implement a framework for automatic essay evaluation using

- Feature Based (Statistical methods)
- Linguistic Structure Analysis

Results of Previous Semester

- Gathered knowledge of ensemble modelling, NLP techniques.
- Measured relevance of search results using basic NLP techniques and statistical features.

Dataset and Evaluation Metric

- Fields
 - Essay_Id
 - Essay_set
 - Essay
 - Rater1 score
 - Rater2 score
- Evaluation metric: Quadratic weighing Kappa
- The square of the error difference between the human score and the predicted score is penalised.

Implemented before Midsem

- Statistical features like count of words, unique words etc
- Grammatical features like POS Tagging and spell check
- Transitional phrases
Illustration: For example
Conclusion: Alas
- Content model
- Evaluation metric and classifier

Impletemented after Midsem

- Co-reference features
- Prompt Argument

Results - Midsem results

- Accuracies at the previous evaluation.

Set	Forest	Bayes	KNN
1	0.77	0.68	0.69
2	0.64	0.48	0.50
3	0.70	0.59	0.65
4	0.66	0.58	0.62
5	0.68	0.58	0.45
6	0.58	0.51	0.46
7	0.56	0.51	0.46

Results - Final results

- The new results using the content + statistical model

Set	Bayes	Forest
1	0.94	0.94
3	0.80	0.81
4	0.82	0.83
5	0.86	0.89
6	0.86	0.85