Assessment of Question Quality Using Bloom's Taxonomy

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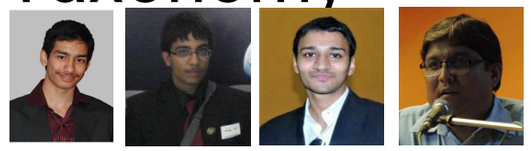


Our Aim

To assess the quality of questions by classifying them according to Bloom's Taxonomy. We want to build a system that can predict the difficulty level of a question to a reasonable degree of accuracy.

Our Goals

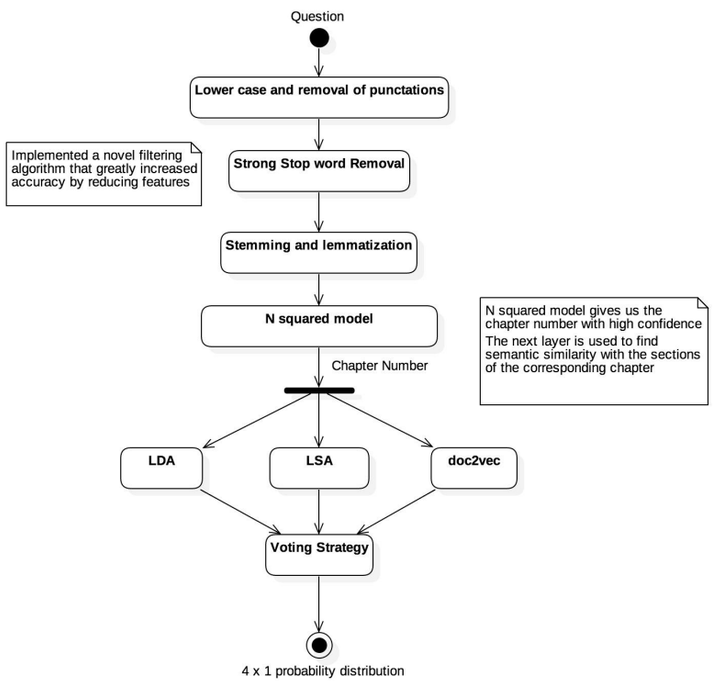
We want our tool to be useful to teachers and students alike. Our tool can be used for

- automating question paper setting
- analysing the study patterns of students
- a pedagogic tool to gauge content delivery

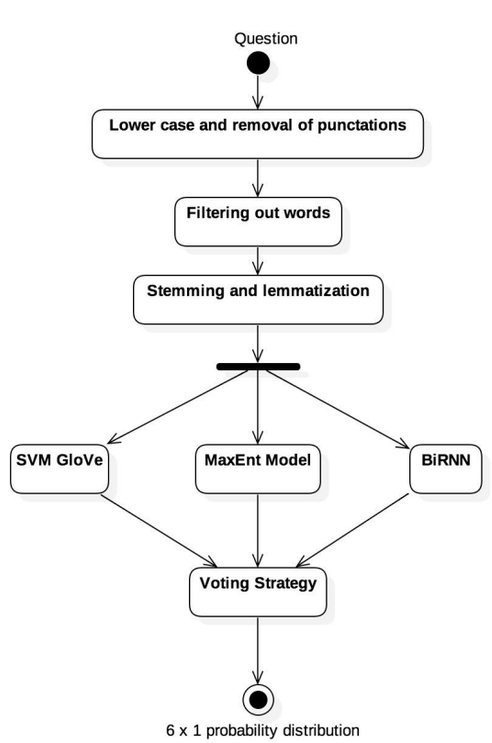
Our Approach

We've built two models: one for knowledge classification and the other for skill classification.

The Knowledge



The Skill

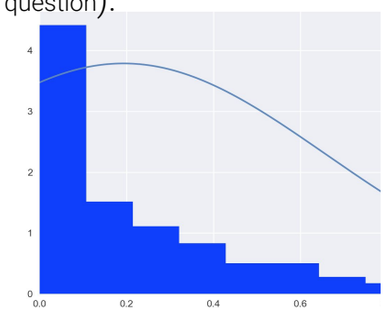


Derive an asymptotic running time complexity of the adjacent algorithm in terms of θ. Assume n is a power of 2. "For the adjacent algorithm, considering "Moving a disk" as a basic operation, derive the asymptotic running time complexity of the algorithm.

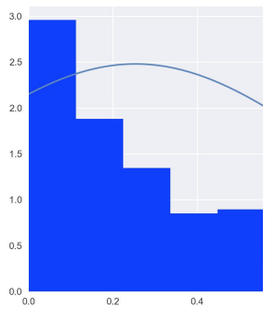
Our Results

- Achieved 90% accuracy with *The Skill*
- Achieved 65% accuracy with *The Knowledge*
- Can determine question quality with reasonable confidence. This opens the door to a world of opportunities.

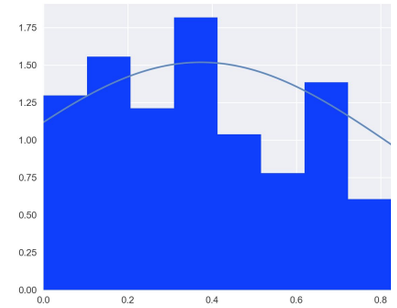
We can tell you if a question is tough or easy with our system (harder questions have higher scores. Indeed a procedural question is harder than a factual question).



Factual Knowledge



Conceptual Knowledge



Procedural Knowledge