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SCREENING WRITING LEVEL

A prototype to screen students' writing level using machine learning

OUR ULTIMATE GOAL:



KEEPING STUDENTS ON TRACK

TOO OFTEN, STUDENTS GET LEFT BEHIND...

TEACHERS ARE OVERWORKED

AND TESTING TAKES UP ENOUGH OF THEIR TIME

WHAT IF THEY HAD SOME HELP?

A SIMPLE, BEHIND-THE-SCENES SOLUTION BRINGS

STUDENTS WHO ARE FALLING BEHIND

TO THE TEACHER'S ATTENTION

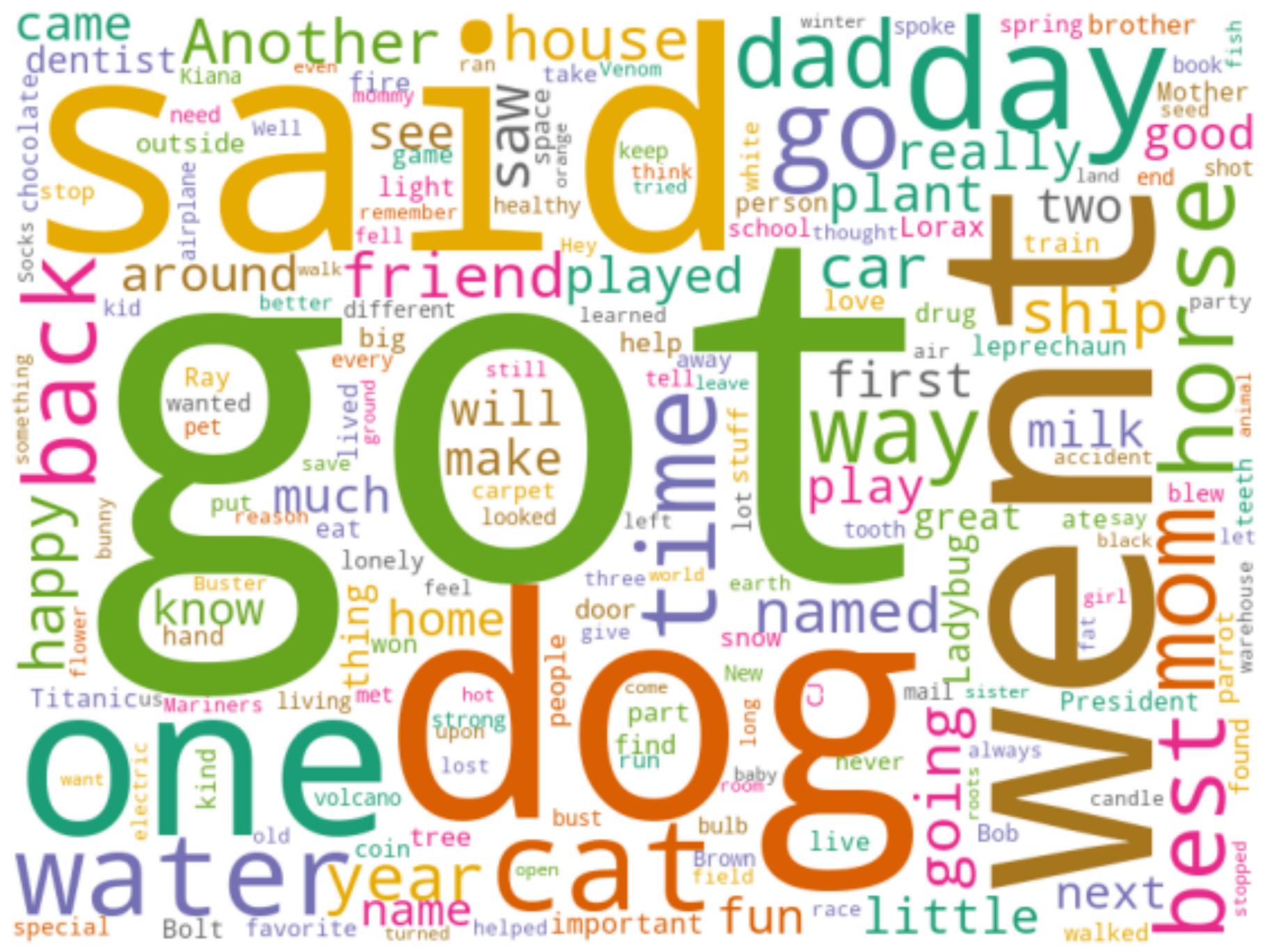
OUR APP WILL AUTOMATICALLY REVIEW STUDENTS' WRITING

- Essays and other writing are compared against grade-level works
- Those falling below standards for the student's grade level alert the teacher
- Allowing the teachers to focus **time and resources** where they are needed most



PROOF OF CONCEPT

- At this early stage, we have gathered a limited corpus of grade-specific essays from kindergarten through high school
- Due to the limited amount of the available data, grade levels were grouped into four groups:
 - Early Elementary (K-2)
 - Middle Elementary (3-5)
 - Middle School (6-8)
 - High School (9-12)
- We used two different strategies to process the text with three different models, to see which would perform best.
- Word Clouds of each grade-group's texts are shown on the following side:



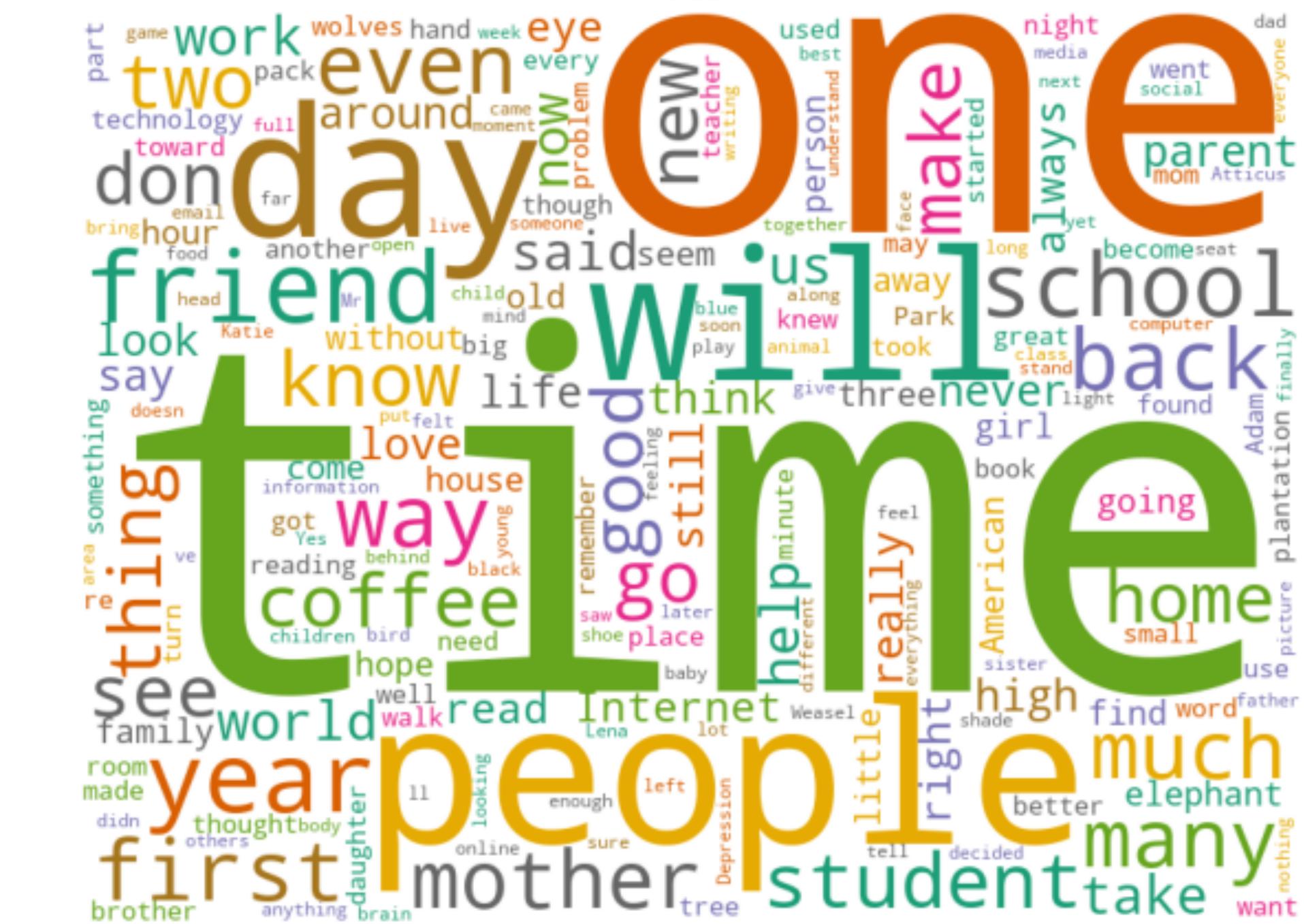
5-8



3-4



9-12



PROOF OF CONCEPT

- Initial results are promising:
- The model correctly predicts grade-group level at a **100%** increase over blind guessing.
- And it will improve with a bigger corpus . . .



WHAT WE NEED TODAY:

- As shown below, as the corpus size increases, the models' ability to correctly predict grade-group level generally increases.
- Funding is needed to source additional training materials; once in production, however, the model will continue improve as it trains on the new source material.

Models	1-2	1-3	2-1	2-3
n=100	61.290	58.065	41.935	35.484
n=188	50.877	45.614	43.860	33.333
n=288	63.218	62.069	47.126	50.575

DEPLOYMENT

- WE ENVISION THIS MODEL DEPLOYED TO SCHOOL SYSTEMS AS A COST-SAVINGS MEASURE
- THERE IS ALSO A VIABLE POTENTIAL FOR ACQUISITION ONCE THE SYSTEM IS DEPLOYED



GROW WITH US!

QUESTIONS & ANSWERS

THANK YOU!