

#### Synthetic Data Generator Algorithm

1. Assign students  $S_{i+1} \dots S_{i+5}$  as graders to every student  $S_i$
2. Sample  $\mathcal{N}(0, 10)$  for each user and assign it as bias  $b$ .
3. Sample  $rg \leftarrow \mathcal{N}(70, 40)$  for each user.
  - (a) If  $0 \leq rg \leq 100$  set  $rg$  as real grade.
  - (b) If  $rg < 0$  set  $rg = 0$  as real grade.
  - (c) If  $rg > 100$  set  $rg = 100$  as real grade.
4. Sample  $g \leftarrow \mathcal{N}(realgrade, 20)$  for each submission.
  - (a) If  $0 \leq g + b \leq 100$  set  $g + b$  as grade.
  - (b) If  $g + b < 0$  set  $g + b = 0$  as grade.
  - (c) If  $g + b > 100$  set  $g + b = 100$  as grade.