

1 We thank all the reviewers for their time and comments. As the reviewers have stated, our main contribution is providing
2 a new benchmark for evaluating general-purpose NLU systems, which is necessary given the saturation of the GLUE
3 benchmark. Our work builds directly on GLUE and maintains the same general structure. Given the successes of GLUE,
4 this decision seems prudent, but we also revise the tasks and rules to address weaknesses of GLUE. Our new benchmark
5 has a stronger focus on low-data tasks, and the datasets are more diverse and less NLI-focused. We are careful to
6 include tasks that are challenging for machines and solvable by humans, and we provide baseline performance for both.

7 Our benchmark does have a less uniform API than GLUE, but we view this as both a pro and a con. With GLUE,
8 all tasks were sentence or sentence pair classification. In early experiments exploring potential benchmark tasks, we
9 found that BERT generally performs well on existing datasets for this type of task, likely because the pretraining
10 procedure explicitly accounts for this format (e.g., via the segment IDs). Also, we found many tasks we wanted to
11 include but would have required awkward format changes to fit the GLUE classification format (e.g. QA). Thus, we
12 believe expanding the range of task formats is beneficial overall. Another advantage of the new formats is that they
13 incentivize researchers to develop better methods for *adapting* pretrained models to relatively complex task formats,
14 instead of only designing better pretraining objectives.

15 Regarding the increased focus on low-data tasks, we agree that the smaller dataset sizes increases the likelihood that
16 transfer learning from large corpora will be important for competitive performance, as seems to be the case with GLUE.
17 However, we suspect that there is much more research to be done on how best to realize this transfer, particularly
18 with only a small number of samples from which to adapt. We observe that the GLUE tasks where humans still
19 substantially outperform models are tasks with the least amounts of data. On the large-data tasks, pretrained models
20 seem to effectively leverage the volume of data to adapt to the task, leading to super- or near-human performance. We
21 thus feel it is timely to place the emphasis on small-data tasks.

22 In terms of measuring specific linguistic capabilities of systems, we provide a diagnostic dataset (AX) aimed to give
23 users a focused analysis of their systems’ language understand abilities. Each example in the diagnostic has expert
24 labels of what types of natural language phenomena are present. Solving an example is evidence that a model has
25 grasped the phenomena in that example. Unlike the main tasks in GLUE and SuperGLUE, the diagnostic dataset was
26 collected from a phenomena-based distribution, and not from a more “natural” data-driven distribution.

27 In selecting the benchmark tasks, we did not try to first identify a set of NLU skills we thought models should have, and
28 then set out to find tasks that test those skills. We believe that such an approach would not likely yield clear conclusions,
29 as there is no standard list of NLU skills in NLP that we could draw on and most tasks require combining multiple NLU
30 skills to solve (confounding conclusions we could draw about whether or not a system had learned a skill). Instead, we
31 sought to maximize task difficulty and diversity (including diversity of some broad notion of what each task tested)
32 within the space of existing, vetted tasks. However, we do believe that several of the tasks in our benchmark are clear in
33 what knowledge or broad skill is being tested for. For example,

- 34 • WSC is a coreference task but is designed to require commonsense reasoning to solve.
- 35 • COPA explicitly tests systems’ causal reasoning ability (somewhat related to commonsense reasoning).
- 36 • CommitmentBank tests whether sentences’ truth conditions apply to embedded clauses (related to veridicality).
- 37 • MultiRC is designed to require gathering and synthesizing facts from multiple text segments.
- 38 • WiC tests whether models understand how the meaning of polysemous words vary according to context.
- 39 • RTE requires grasping a broad range of abilities. This is typical of NLP benchmark tasks (e.g. SQuAD), and
40 we believe is especially appropriate for a benchmark for general-purpose language understanding.

41 Regarding bias in the type of NLU skills our benchmark tests for, some of the tasks do require the same high-level
42 abilities to solve. However, even if the ability is the same at a high-level, the specifics of the execution and the contexts
43 in which that ability must be applied will differ across tasks. Therefore, skill overlap across tasks is useful because
44 we want to test whether systems can perform these high-level abilities despite surface variation between tasks. We
45 were hesitant to add more tasks when we already had a similar task, e.g. the very many different QA datasets that are
46 currently used. Furthermore, all of the tasks are fairly mainstream, challenging NLP tasks, which we take to mean that
47 solving these tasks requires interesting skills outside the scope of current approaches.

48 The average WSC sentence length is 25 words. The test set is 146 examples (Table 1), around the same size as the
49 version in GLUE (WNLI). Despite the small dataset, the perfect human performance on WSC suggests that it represents
50 a real, if challenging, language understanding task, and therefore worthwhile to include. Since our NeurIPS submission,
51 systems have made substantial progress on WNLI, indicating that the dataset is not too small to learn the task.

52 Finally, we agree that a short name will help and we will add one to the camera-ready version! We thank the reviewers
53 again for their time and thoughtful feedback.