Engineering at OpenAI

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1. How can engineers accelerate AI research? (OpenAI example)

2. How can I tell if I have an engineering problem?

3. If I have an engineering problem, what can I do?

1. How can engineers accelerate research?

At OpenAI:

A. Environments & datasets
   Universe environment, Human demonstrations, Robotics simulator

B. Infrastructure
   Cluster, Distributed training (run same model on laptop or 100 GPUs)

C. Tests, benchmarks, measurement, and reproducibility
   Regression tests, Public measurements of progress

2. How can I tell if I have an engineering problem?

I already do experiments, but they're …

- Annoying
- Slow
- Repetitive
- Fragile / keeps breaking
- Tools are hard to use
- Small; only for toy problems

I have an idea for a great experiment, but I'm not doing it because…

- The environment/data doesn't exist, or is hard to access
- The system would have to be complicated (... reliable, low-latency)
- The hard work is implementation: unglamorous, career dead-end
- "It's impossible"

3. If I have an engineering problem, what can I do?

A. Hire engineers

B. Look for open source solutions (or ask other groups to share theirs)

C. Let OpenAI know! (if N research groups are all bottlenecked on the same problem, we might tackle it)

Engineers can…

improve/accelerate your workflow

allow you to do "impossibly" large/complex experiments

Keep an eye out for engineering problems, and keep in touch!