**TetriScope: Visualizing Scheduling with Adaptive Plan-ahead**

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**Motivation**

- Need to understand/debug complex scheduling decisions
  - Effect of Job Properties
  - Scheduler performance
- Scheduler state is difficult to analyze at scale
- TetriScope: a visualization tool that presents YARN scheduler state visually so that users can grasp the cluster state and analyze scheduler behavior

**Demo Scenarios**

- **PLAN AHEAD**
  - GPU job 1 schedules on GPU machine
  - GPU job 2 runs on non-GPU rack since it is faster than waiting for GPU rack
  - GPU job 3 and 4 is planned ahead in GPU rack

- **GLOBAL SCHEDULING**
  - Availability job arrives with loose deadline
  - GPU/MI/PNI arrives with tighter deadline
  - Only way to meet deadline: run GPU and MPI job before Availability Job

- **PREEMPTION**
  - Best Effort job already occupying GPU rack when GPU job arrives
  - Best Effort job is preempted to let GPU job run on GPU rack
  - Best Effort job is scheduled on non-GPU rack after preemption