Twitter @ SOSP'21

Twitter has a service-oriented architecture, built on top of large-scale distributed infrastructure. Our systems continuously evolve and scale with new demands and capabilities brought by features, user markets, and hardware and software advancements. Challenging problems are routine – a selection of topics we're currently thinking about include:

- Partition stateful data by geo-locality to avoid *n* copies in *n* regions.
- Detect anomalies in operational health metrics (observability data):
  - predict the problem before it happens;
  - dynamically increase the sampling rate of health signals if potential problem gets detected.
- Introduce tiered storage in Kafka to use it as a long term data store versus temporary streaming buffer.
- Model latency critical-paths to explore wide area service placement trade-offs.
- Use stream processing to construct service dependency graphs from distributed traces for real-time debugging and diagnostics.
- Design and optimize storage systems for new hardware:
  - design key-value or data structure storage on top of non-volatile memory;
  - optimize RPC based on new kernel and NIC features.
- Profile performance fleet-wide, analyze high-concurrency servers, and optimize scheduling.

If you are excited by the scale, complexity and unique challenges of Twitter's infrastructure, come talk to us at our info session on Tuesday, find us on Slack at #sponsors-twitter, or apply for a position at careers.twitter.com. We have openings for internships, new graduate and mid-career positions.

Why work at Twitter?

- Large-scale, complex infrastructure and rich production data means an environment that embodies many cutting-edge systems problems – especially distributed systems problems!
- There is a short distance from idea to production, reflecting the relatively small size of the engineering organization and a willingness to innovate. At Twitter, even as an intern or a new hire you can own a significant problem with real-world impact.
- We have an open culture with a long track record of sharing our advancements with the community, both software and data. For example, Rezolus, Finagle, Heron, Pelikan, cache traces, and many more.
- The company is committed to supporting both in-office and remote workers, with processes and working conventions that ensure no employee is disadvantaged by their location or time zone.
- We care deeply about inclusion and diversity, and this is reflected in how we work, every day.

Meet the Sponsors Twitter Session

Rebecca Isaacs, Yao Yue, Abhishek Maloo, Uma Srinivasan, Dan Luu, Yazhuo Zhang (current intern) and Juncheng Yang (ex-intern) will be at Twitter's Meet-the-Sponsors session.

Tuesday Oct 26, 22:00 UTC (15:00 PDT)

Details will be posted in #sponsors-twitter

Please join us, we'd love to answer your questions and share our experiences at Twitter.