Amit K. Saraff

726 North 137th Ave, Seattle, WA 98133, USA
+1 (407) 484-0146

Experience

Storage Team, Mixpanel Oct 2022 - Nov 2024
Seattle, WA (Senior Software Engineer)

- Instrumental in driving to completion our India DC rollout to enable data residency for customers in APAC - https://mixpanel.com/blog/india-data-residency/.
- Tech-lead on initiative to deprecate the use of persistent disks in our storage layer. Doing so reduced our infrastructure spend, simplified the storage-tier architecture, and sped up customer queries - multiple wins!
- Tech-lead on initiative to optimize our infrastructure costs by single-instancing all customer historical data which resulted in reducing our overall GCP bill by $\tilde{1}0\%$.
- Dev lead on a system to detect and remediate hotspots in customer data in order to reduce long tail query latencies which, in turn, impacts query runtimes and customer experience.

xFlow, Qualtrics Corporation Jan 2022 - Oct 2022
Seattle, WA (Staff Software Engineer)

- Tech-lead for the xFlow platform which is Qualtrics' no/low code solution for experience management. Initiatives I led and contributed to include backend transition (Amazon SWF to Temporal), data-center migrations, new site build-ups, and delayed workflow executions (new feature).

Azure Compute, Microsoft Corporation April 2020 - Jan 2022
Redmond, WA (Senior Software Engineer)

- Team-lead working on reducing dock to live KPI from weeks to hours for customer managed edge zones. Reduces overall hardware lifecycle costs and enables faster small footprint datacenter buildouts.
- Designed and implemented a zero-touch orchestration system to quickly bring up managed edge zones which ties together compute, storage, and slb (software load-balancer) buildouts.

OneDrive, Microsoft Corporation March 2015 - March 2020
Redmond, WA (Senior Software Engineer)

- Project team-lead for building an object store that applies erasure coding across datacenters for long-term storage. The system provides comparable reliability and availability as the existing, globally replicated store, while reducing effective bytes stored by 33%.
  Managed a team of 3 developers and released a v1 inside the OneDrive Consumer (ODC) storage stack. Microsoft Research Paper
- Built a system to manage data movement across storage tiers to optimize price performance over an object's life-cycle. Influenced through close collaboration the design and development of Azure XArchive. Steady-state accomplished double-digit petabyte usage, driving down storage costs.
- Collaborated on a single-instance object store (in-memory, object-level deduplication with a modifiable dataset) to reduce the total amount of storage transactions from high-transaction partners. At its peak, the system handled up to 8% of total daily create and update operations.
- Implemented an object garbage collector to detect unreferenced entries in ODC Storage. This reduced over 15 petabytes of total storage in the first year, with 0 user data loss.

SQL Server, Microsoft Corporation August 2011 - March 2015
Redmond, WA (Software Engineer)

- Tech lead for automation of release workflow process. Working with 4 developers to streamline SQL Server's update release process using a workflow-based system thereby reducing usage of disparate tools and vendor dependency.
- Worked on front-end of Query Store in Management Studio which presents a graphical interface to database administrators to help track top/regressed queries and allow forced plan selection.

Physics and Astronomy, Johns Hopkins University May 2010 - October 2010
Baltimore, MD (Summer Intern Developer)

- Designed and implemented an image-processing pipeline for Hubble Space Telescope images under Dr. Wei Zheng. Modified and added extensions to existing drizzle process to enable combining of multiple images from WCF3 and ACS cameras. Extended APSIS and multidrizzle packages to enable combining multiple arbitrary images.

Publications

- "APLUS: A Data Reduction Pipeline for HST/ACS and WFC3 Images," Astronomical Data Analysis - VII, Proceedings, May 2012

Patents

- "Peer booting operating systems on an edge network, Patent# 12020038, Granted Jun 25, 2024
- "Pre-provisioning server hardware for deployment on an edge network, Patent# 12212456, Granted Jan 28, 2025