ALLAN PENG

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WORK EXPERIENCE

Databricks

Sr. Software Engineer, Cluster Team *2021 -2025*

- Owned the storage/database layer for the cluster manager services underpinning all of Databricks. When we started, database inefficiency and instability were the biggest risks the team faced, and they blocked broader re-architecture and stability projects, including zero downtime cluster manager. Partnered with the nascent storage team to build deep expertise in storage internals and query optimization from the ground up. We went from weekly region-down outages to basically no DB incidents at all, eliminating an entire category of operational risk and enabling the team to redirect investment towards other areas.
- Led a series of stability projects - improving database query patterns, optimizing connection pools, migrating our databases to MySQL8.0 and to TiDB, made query performance bounded and deterministic, optimized PMAX query runtime down from O(minutes) to under 1 second
- Led incident response and postmortems of several large scale sevs, presented at eng-wide service health reviews, drove QOL improvements to on call process; Said one staff engineer: “I don’t worry whenever you’re on call because I know everything will be covered”
- Debugged and resolved several nasty bugs spanning multiple infrastructure layers, including: misconfigurations in our schema change tooling that caused databases to get locked for long periods of time, inefficiencies in the feature flagging infrastructure causing regional service degradation, character encoding issues in Kafka/CDC pipelines causing data corruption
- Recognized as a go-to technical resource across all of engineering. Gave a series of well-received org-wide talks on system internals and battle scars from prod. Onboarded new Amsterdam team thru in-person knowledge transfer & ongoing consultation.

Mod9 Technologies

Software Engineer *2018-2021*

- Led development on core B2B product, a real-time Speech Recognition server capable of transcribing concurrent audio streams at state-of-the-art accuracy. Managed product releases, interfaced with clients, and wrote product documentation.
- Built parallelized recognizer that transcribes audio up to 400x faster than real time.
- Implemented new speaker diarization (segmentation) system, using agglomerative clustering and HMM-GMM models improving diarization error rate from 15% to 4%.
- Trained HMM-DNN models to transcribe English and Spanish using Kaldi.

SKILLS

Languages: Java, C, C++, Python, Go, Scala, SQL, Chinese
Infrastructure: Distributed systems, Kafka, MySQL, TiDB, Docker, Kubernetes, Kaldi

EDUCATION

University of California, Berkeley

B.A. Double Major: Applied Math & Computer Science; Regents & Chancellor’s Scholarship

London School of Economics

International Relations & Cyberlaw