

Justin Chang

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Experience

- Senior Software Engineer – Aptos Labs (formerly from Meta)** June 2023 - Present
Data Infrastructure Team: Rust, Kubernetes, Pulumi, GCP, Docker, Grafana
• Designed a no-code indexing platform that enabled developers to index and serve data from custom smart contracts without writing code or running infrastructure, reducing indexer development time from days to minutes
• Led the productionization and migration of the Indexer gRPC transaction stream from v1 to v2, achieving 99.99% reliability and sub-second latency, reducing cloud costs by over \$110,000 per year, and introducing new features
• Designed a performant, memory-and-thread-safe in-memory cache with a strict deterministic FIFO eviction policy, decreasing latency of the Indexer gRPC transaction stream by 100 ms (15%) and reducing Redis calls by 85%
• Reduced the load time of NFT assets by over 95% by implementing a web crawler to cache on-chain assets in a CDN
• Developed and maintained the indexing infrastructure of various products including the core data APIs, a notification platform, an on-chain tournament system, and miscellaneous seasonal, festive, and exploratory initiatives
- Production Engineering Team: Rust, Kubernetes, Pulumi, GCP, Docker, Grafana*
• Spearheaded the platformization and productionization efforts for Geomi, a developer platform generating over \$1,000,000 ARR, encompassing multiple tier-1 products including core data APIs and a custom API Gateway
• Facilitated the production readiness of the API Gateway, enabling it to handle 95% of all traffic on the Aptos blockchain
• Designed a scalable job management platform that abstracts the complexities of failure management by enabling asynchronous job scheduling, supporting request idempotency, and automating retries on failures
• Led the cross-functional efforts to design and ship a notification platform, enabling real-time push notifications of on-chain events for Petra Wallet users
• Supported the production engineering needs of the entire 80-person engineering organization as a team of 4 engineers
- Software Engineer Intern – AppLovin** January 2023 – March 2023
Data Platform Team: Apache Spark, Apache Airflow, Apache Iceberg, Java, Scala, GCP
• Initiated the migration to Apache Iceberg, lowering cloud costs and improving aggregation job performance by 59%
• Designed a metadata layer to track files in object storage to optimize file listings, improving query performance by 22%
- Software Engineer – Sei Labs** February 2022 – November 2022
Engineering Team: Rust, React.js
• Developed decentralized finance protocols that targeted yield optimization of liquidity providers and stakers
• Oversaw the Initial Dex Offering (IDO) which generated \$100 million of governance voting power in the first two weeks
- Software Engineer Intern – AppLovin** June – September 2021, June – September 2022
Infrastructure Team: Apache Spark, Apache Airflow, Java, Maven, JUnit, MySQL
• Developed custom tooling to enhance observability of Airflow DAGs, improving observability and debugging efficiency
• Designed a testing framework for data aggregation projects to identify regressions of upstream client APIs
- Research**
- Research Assistant – Sky Computing Lab (UC Berkeley)** June 2023 – February 2025
Python, Kubernetes, GCP
• Advanced the sky computing vision through research on cross-cluster scheduling, compatibility, and autoscaling
• Luo et al. *Starburst: A Cost-aware Scheduler for Cloud Bursting*. USENIX ATC 2024, Distinguished Artifact Award
- Undergraduate Researcher – UC Santa Barbara NLP Group** September 2021 – May 2023
Python, Ruby on Rails, Amazon Mechanical Turk (MTurk)
• Researched NLP topics with a focus on benchmarking LLM reasoning advised by Professor William Wang
• Chang et al. *WikiWhy: Answering and Explaining Cause-and-Effect Questions*. ICLR 2023, Oral - Top 5% Paper

Education

BS, Computer Science | University of California, Santa Barbara

Grad 2023