MELODY LI

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SKILLS

Languages: Python, C, C++, Objective-C, Kotlin, JavaScript, Go
Tools and Frameworks: Linux, Node.js, jQuery, Jenkins, Dagger, Git

WORK EXPERIENCE

Snap Inc, iOS Software Engineer — Oct 2021 – present

Camera team, improving the performance, quality and reliability of video messages and developing editing tools on Snapchat iOS. Took ownership of media import services beginning in March 2022.

- Codeveloped end-to-end sound mixing technologies — a top-requested feature from content creators — alongside one other engineer to enable support for multiple audio tracks in creation flow, affecting an estimated 200 million daily video messages
- Migrated all legacy editable-video playback and client-side transcoding services into newer pipeline to accelerate feature development, reducing p50 latency of video backups by 4% and default video message p50 latency by up to 8%
- Designed client-side automated testing framework in Objective-C to measure video quality degradation, fixing 5 longstanding transcoding issues related to video frame misalignments and identifying up to $25 million in storage cost-saving opportunities

Google, Software Engineering Intern — Sept 2020 – Dec 2020

Hotel rankings team, selecting best name for rental listings to maximize click probability.

- Designed data pipeline to add ranking features to 2 million daily Google-searched query datasets, scoring new datasets in hotel ranking machine learning model and filtering for highest scoring name using C++, Python and SQL
- Configured pipeline to run in parallel using Flume through Borg cluster management system, processing over 3 million template names containing 25 translations each in 20 minutes
- Analyzed ranking model results to determine natural language translation shortfalls, determining a template name selection rate statistical variance of 40% across different languages

Snap Inc, Software Engineering Intern — May 2020 – Sept 2020

Monetization and ad formats team, improving performance of web view on Snapchat Android.

- Designed application to isolate web view from Snapchat app using Kotlin, Dagger and Jenkins for automated performance testing, allowing collection of performance metrics within a 2% error bound on identical runs
- Migrated lenses web view to newer web service to enable redirecting and deep linking, improving the latency by 6%
- Processed 50+ terabytes of advertisement data with BigQuery in SQL to filter suspicious advertisers, compute ad purchase conversion rate, and model relationships between web view latency and rate of purchase

PROJECTS

HDR Algorithm (Python)

- Implemented Debevec-Malik and tone-mapping algorithms to improve blending of homographies captured with different exposures

EDUCATION

University of Waterloo

Honours Bachelor of Computer Science, Minor in Statistics (Dean's Honours List) — **2017 – 2021**