Darren Lee

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EXPERIENCE

Software Engineer Google *Jun 2019 - present*

- Core member of Cat2 Indexing working on Display Ads indexing infrastructure to process hundreds of millions of ads
- Owner of Cat2 Indexing Visibility. Designed and implemented a low latency Stubby Service on top of Spanner databases to provide visibility and history of petabytes of adgroup data, used by 300+ engineers and tech support.
- Implemented and productionalized Rephil Transformer to compute text/language signals for all Display Ads used heavily in serving systems. Achieved neutral revenue impact while using 95% less CPU and improving data freshness.
- Made substantial improvements to the Transformer framework by implementing features like batch transformations and retryable transactions. Fixed latency issues with CAu Transformer which had been failing for 6 months before.
- Designed and implemented DataObjects, a Redstone API for loading, processing, and tracking non-columnar data types in the ColumnProcessor framework. Involved template-metaprogramming and thread safety in C++.
- Root-caused, authored, and fixed 2 revenue-impacting postmortems and was recognized with 3 peer bonuses.
- Added Subspace alerting and monitoring, canarying for 35+ LADL datasets used in Cat2 Indexing.
- Made numerous contributions to Catbert migrations to unblock next-gen Cat2 Indexing infrastructure.
- Closely collaborated with several quality teams and led 3 weekly syncs; mentored/guided 2 new team members.

Software Engineering Intern Google *May 2018 - Aug 2018*

- Implemented support for sending, receiving, storing, and displaying attachments (e.g. images) in the live chat channel for Google Express Customer Support, using Java, Angular Dart, and HTML/CSS.
- Enabled the real-time sending and receiving of chat attachment messages using Firebase.
- Resized and compressed larger images to achieve lower client-side latency for image previews.

Software Engineering Intern Yahoo! *May 2017 - Jul 2017*

- Redesigned and rebuilt a developer-facing search website for yahoo-internal and external npm modules from scratch, using Node.js with Express and Handlebars as a full stack framework.
- Utilized Vespa (yahoo's internal search engine) with YQL to optimize search, implemented caching of package metadata, wrote unit tests to verify code correctness, and implemented metrics to track performance.
- Designed and created a security-check tool for Yahoo's cybersecurity team to reduce JavaScript/Node security vulnerabilities, by identifying underlying packages/libraries used at the application layer that have security risks.

PROJECTS

DaroCaro's Pixar Puzzle Hunt darocaro.github.io *Aug 2020 - Dec 2020*

- Designed and built a 20+ puzzle Puzzle Hunt from scratch for 600+ teams / 1500+ visitors (>90% positive feedback).
- Leveraged Firebase/Firestore to create a scalable backend server & database to support answer checking (peak 1000+ guesses/min), leaderboards, and team data (including login/authentication, guess history, puzzle solves, hint queries)
- Implemented a client-side interactive drawing tool to allow users to draw directly on puzzle pages.
- Designed and implemented the web frontend using HTML/CSS/JS including puzzle pages, team signup/login flow.

EDUCATION

University of California, Berkeley *Aug 2016 - May 2019*

Electrical Engineering and Computer Sciences (EECS), B.S. GPA: 4.0 (tech.), 3.95 (cum.)

- Graduated with Highest Honors (top 3% in College of Engineering)
- Regents' and Chancellor's Scholar (awarded to top 1% of class)
- Coursework included: Machine Learning (CS 189), Artificial Intelligence (CS 188), Efficient Algorithms & Intractable Problems (CS 170), Internet Architecture (CS 168), Computer Security (CS 161), Probability Theory & Random Processes (EECS 126)

Skills: C++, Java, Python, SQL, JavaScript, HTML/CSS, git/unix