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Experience

Staff Engineer   Feb 2024 - Present
Google   Remote, NJ

- Led Google Ad Manager response to Instream video advertising for Privacy Sandbox, responsible for a projected $xxxM in revenue-loss mitigation.
- Re-architected the video SDK lifecycle to solve for zero-latency ad playback using a combination of offline video playback and just-in-time ad decisioning, via interstitials.

Tech Lead/Manager   Mar 2021 - Feb 2024
Google   Remote, NY

- Rebuilt the Video Ads SDK team after 4 members left, including the acting manager.
- Developed the next generation of leads by carving out areas of ownership, then coaching and delegating responsibilities.
- Drove development of 16 distinct binaries by emphasizing developer scalability and investments in tooling + productivity.
- Responsible for xx Trillion ad requests/year, 3x growth in GAM SDK impressions over 1.5 years.

Tech Lead   Feb 2018 - Mar 2021
Google   New York, NY

- Championed and implemented a solution for bringing Google-signed-in personalization to Instream video advertising on Android.
- This new module is running on 1B+ devices, enabling low-latency cross-device advertising and unlocked a critical business partnership.
- It has been extended to solve for GoogleTv and gBid (500k reqs/second) due to its performance and handling of user-privacy. It is now being investigated as the core identity provider for AdMob.
- Oversaw implementation of GDPR, CCPA and COPPA compliance for digital video advertising, impacting 2B+ impressions/day.

Engineering Manager   April 2016 - Jan 2018
JW Player   New York, NY

- Interviewed, hired and built out the Data organization from 8 members to 30, as part of four independent teams.
- Successfully helped principal and senior engineers with career planning and coaching, through humbleness and asking questions.
- Drove data architecture decisions when scaling data systems, from 15k req/sec to 60k req/sec.
- Perform technical comparisons and break-even analysis of technology stacks, then negotiated package pricing with cloud providers including AWS, Snowflake and ModeAnalytics.
- Revamped processes for Database Changes and Incident Response to 70 engineers across 8 teams; decreasing service outages from 0.15% to 0.01% weekly.

Senior Software Engineer   May 2014 - April 2016
JW Player   New York, NY

- Redesigned the Javascript message bus for higher performance, shaving 20% off startup time, across 1 billion plays per month.
- Lead Engineer on implementing VPAID2 specification from the IAB, HLS standard from Apple, and Chromecast from Google.
- Prototyped and built a full-stack testing framework combining automated and manual tests. Regression testing decreased from 4 weeks to 1.5 weeks.

Software Engineer   June 2012 - April 2014
FactSet Research Systems   New York, NY

- Technical Lead on several web applications, setting the record for fastest rendering time among hundreds.
- Created a tool *p4-compare*, which let developers compare the cyclomatic complexity of their code changes against the baseline before committing it.
- Built out a toolkit for rapidly prototyping new reports, allowing teams in New York, Norwalk and London to search and share code as reusable modules.
- Learned to maintain, extend, and love legacy codebases. Or at least love refactoring them.

Research Fellowship with Xerox   June 2011 - May 2012
University of Rochester HCI Lab   Rochester, NY

- Researched crowd-sourced real-time audio transcription for hearing-impaired internet users.
- Developed a management application for Amazon Mechanical Turk which allowed faster iteration on experiments.
- Awarded Xerox Fellowship for contributions to real-time processing of crowd inputs.

Full Stack Game Developer   June 2008 - April 2012
Freelance   New York, NY

- Created a new interface to a text-based MMORPG, to enhance and improve fundamental gameplay.
- Provided real-time analytics comparing 800+ registered users - at peak popularity 50k writes per day.
- Wrote bots to simulate human interaction, automating every aspect of gameplay. Required header-spoofing, captcha cracking, and basic NLP. (Don't tell the admins!)

Education

Bachelor of Science, Computer Science   May 2012
University of Rochester   Rochester, NY

Publications

Promoted Content Selection and Delivery in a Television Platform   March 2023
Utility patent (GP-304960-00-US) for user addressability on TV platforms, utilized by Android TV.

Real time Captioning by Non-Experts   October 2012
White-paper on crowd-sourcing audio transcription, nominated for best paper at UIST.

Online Sequence Alignment for Real-Time Audio Transcription by Non-Experts   November 2012
Research on aligning tokenized input for optimal sequencing, published at AAAI 2012.

Other Contributions

Election Reform New York   February 2017 - 2020
Founder of non-profit group that got Ranked Choice Voting passed for primaries in NYC in June 2019.

The Nitty Gritty of Adaptive Video Transmuxing   May 2016
Presented to EmpireJS on efficient video transmuxing to improve time to first frame (400+ attendees).

Skills

- **Leadership:** `Management`, `Mentoring`, `Hiring`, `Performance Reviews`, and `Career Development`
- **Programming Languages:** `Java`, `JS/TS`, `C++`, `Python`, and `SQL`
- **Data Experience:** `Spark`, `Storm`, `Kafka`, `Hadoop/MapReduce`, `Hive`, and `GraphX`
- **Interests:** `Music`, `Election Reform`, `Gardening`, and `Chat bots`, `Data Visualization`
- **Favorite Places:** `New York`, `Puglia`, `Nanjing`, `Turks'n Caicos`, `Tamarindo`, and `Buenos Aires`