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Summary:

I've been a Sr. Software Engineer since 2017 at Amazon with multiple organizations, programs and teams. In each program I operated as the technical lead for the varied S-Team projects like launching our product to a global offering, consolidating the different business-lines into a single technical product and distributing that product to multiple regions for availability and resiliency. In my last role I was reporting to a director of the Commerce Org. with 5 programs, 200-250 employees, where we enabled customers to sign-up to Prime and Amazon Channels Video Subscriptions and the purchasing and renting of movies and tv shows on all client-platforms from mobile, webbrowser to set-top boxes. I focused on all aspects of operational excellence across the organization, mentoring the other Sr. Engineers and advising both technically and strategically on long-term initiatives. My primary technical focus was that distributed architecture for large sporting events, where we simply could not fail, like Thursday Night Football, the English Premier League and the Super Bowl. I ensured that we had robust metrics in place that were fast-detectable and easily observable, but this was eventually secondary to a fail-over architecture that meant we could serve customers from any region in the world. I loved the mentoring of others and the strategic planning, but I am always happiest going deep on a problem and getting hands-on with the key initiatives.

Experience:

Amazon – Prime Video Commerce | Senior Software Engineer

Feb 2022 – Nov 2023, London, UK | Distributed Architecture for Availability and Resiliency, Orchestration Framework for Worldwide Customer Acquisition



In the Commerce organization of Prime Video, I was focused on the increase of minutes streamed across multiple products from Subscriptions, Transactions and Linear Events. The primary focus was delivering a consistent experience across all clients supported by Prime Video and guaranteeing availability through resiliency measures.

Distributed and replicated services, for the Commerce Org in Prime Video, necessary to serve a customer from anywhere in the world.

- Identified and organized key stakeholders from 9+ programs in a technical camp to identify, discuss and solve cross-team key challenges to distribute and serve our customers from any region.
- Led the cross-org technical assessment review, presented to the senior leadership team and collaborated with other organisations to prioritise effort.
- Built and deployed a distributed consensus system for a highly available, low-latency, mission critical use-case.

In the final review the Sr. Principal Engineer commended me on the document setting the direction for the organisation, solving the key-challenges for the organization without imposing every technical decision. 24-months later and we launched successfully, without issue, distributing 50% of the load to another region.

Amazon – FireTV Devices | Senior Software Engineer

Aug 2020 – Feb 2022, London, UK | Android, FireTV OS Devices



Our direct mission was the successful launch of FireTV devices in Europe with an emphasis on the first TV device and partnering with external organisations to launch the Tier-O partner applications like BBC, ITV, Zoom. For BBC especially in the UK, this was a multi-month broad certification process from linear over-the-air broadcasting, native application internet broadcasting and on-demand content.

Enabled Camera drivers for FireTV OS launch in partnership with Zoom

- Took over as technical leader to partner with the internal Fire OS Drivers team and produce necessary driver updates required by Zoom.
- Led the quality assurance strategy across multiple test-frameworks and device labs to ensure the successful launch on the first Fire OS TV and a handle full of Alexa devices where a screen is present.

Testing on physical hardware is hard; The device released without issue and through the arduous journey of device automation I wrote a proposal to consolidate the multiple test-frameworks which was approved and funded in 2022.

Amazon – Prime Video Commerce | Software Engineer II & Senior Software Engineer (2017) Apr 2014 – Aug 2020, London, UK | Orchestration Framework for Worldwide Customer Acquisition

At the start of the Commerce organisation, I developed an application framework that enabled us to consolidate the customer experience across multiple client-platforms, from website to mobile to set-top-boxes, into an orchestration engine. The typical application of an orchestration engine is for small distributable data-oriented workloads, but we needed the capability to serve all customers across all devices consistently and we needed that separation of concern for the various products from subscriptions of Prime, Channels and then the transactional buy and rent. This highly complex architecture celebrated its 8yr anniversary in 2023 and has evolved to support all customer journeys globally, with high availability and supporting 5 programs of 40-50 engineers delivering unique customer products.

Launched globally from <10 key countries to 180+

- Restructured several key customer journeys to be agnostic of the offering and modelled this under a service. This was key to scale to the variance we would require.
- Executed several abstractions from our codebase that minimised session state management which was critical for travelling customers representing 12% of our users.

Amazon – Website | Software Engineer I & II

Aug 2012 – Apr 2014, London, UK | Perl, Mason, Apache, Html, CSS, Typescript

The Prime Video Website organisation was comprised of 5 teams operating on different key customer journeys. In my early days this was re-building Lovefilm.com on Amazon technology with the eventual porting of customers into the Amazon ecosystem. In that Amazon ecosystem we incorporated those customers onto the first Amazon Video offering on the Amazon.co.uk, Amazon.de and eventually Amazon.co.jp domains. My favourite projects at the time were developing a data-aggregation framework, like the eventual product 'Graph QL', for the Website platform and then an application framework for launching new subscriptions to ease the migration of customers.

Markit Group – Hub | Intern

Aug 2010 – Aug 2011, London, UK | Java, SQL for Test Automation and Data Publishing

At Markit Group I did a 1yr industrial work placement where I worked with the Hub Team that aggregated news articles from various financial institutions. Aside from projects that I developed to launch new partners into our ecosystem I developed an automation suite that enabled us to launch our product in 30m from 2-3D and incorporated that suite into a set of tooling for a Live Ops Team in the Amsterdam Datacentre.

Skills

Back End Development | Java, Spring, Python, Amazon AWS, Microservices, CI/CD Data Pipeline | MongoDB, SQL, Redshift, S3, Kinesis Front End Development | Perl, Mason, React, Redux, NodeJS, Typescript, HTML, CSS Miscellaneous | Distributed Consensus, Selenium Framework, Docker, IAAS | IAAC

Education

University of Hertfordshire B.S., Computer Science Sep 2012 | Hatfield, Hertfordshire



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