Vijay Arunkumar
Software Engineer

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Palo Alto, California, US

Software Engineering Lead. Curious about the cutting edge. Obsessed about keeping it simple.

Experience

Principal Engineer
Apr 2022 - Jan 2023
Skiff · New York, NY / San Francisco, CA

As senior member of engineering team, oversaw design decisions and implemented product features to ensure scalability with user/feature/organizational growth. Also, led the effort to improve our backend service's reliability and performance.

· Improved p95 response time for backend service by ~20x from 1.2s to 65ms.
· Improved DB CPU load by ~100x by improving our schema to simplify indexing and querying.
· Designed and implemented web3 wallet-based addressing for Skiff Mail and integrated with ENS via Infura and Alchemy APIs.
· Designed and implemented an internal drip-campaign mass mailer.
· Unified our disparate GraphQL client libraries into a single shared library to streamline frontend development.

Software Development Engineer
Apr 2020 - Apr 2022
AWS - Amazon · New York, NY

Engineer in the Enterprise Support Billing team within AWS Commerce Platform org, responsible for improving workflows and processes used to bill our high-spend enterprise customers.

· Worked with cross-functional teams across departments and led the effort to improve our customer onboarding workflow from ~2 week turnaround time to ~2 hours.
· Iteratively improved code and processes for our monthly bill-run process to improve speed, accuracy, and reliability.
· Worked with PMs, TAMs, and Customers on resolving customer billing issues and inquiries.
· Liaised with cleared engineers in our SCIFs on process improvements and customer issues related to sensitive government data.
· Implemented features and improvements in our billing dashboard app, built atop Airwolf and Polaris, Amazon's internal UI and Component framework a la React and Material UI.

Senior Software Engineer
Jul 2018 - Feb 2020
Dropbox · New York, NY

Engineer on Dropbox Showcase and Paper Platform teams.

· Designed and implemented React UI Components and Product Features on top of Paper for Showcase.
· Improved product reliability through a comprehensive list of Jest/Enzyme unit tests and Selenium/Capybara integration tests.
· Delivered HIPAA Compliance for Dropbox Paper.
· Improved Developer Experience by streamlining our Bazel dependencies and by creating a shared services sandbox / sidecar proxy to vastly reduce memory footprint on dev boxes.

Senior Software Engineer
Jan 2016 - Dec 2018
Google · New York, NY

Senior member of Docs Comments team (Docos) responsible for working with PM, UX, and Eng Managers to deliver projects from ideation to launch.

· Implemented the "Instant Mentions" feature across all platforms (Javascript, Android, and iOS).
· Primary POC for our iOS code for reviewing external teams' features, designs, and code.
· Designed and implemented "Action Items" for iOS (Objective-C and bundled Javascript).
· Led the design and scope for syncing Docs Action Items with Calendar Reminders.
· Led the effort to improve UI performance for documents with a large comment count, and designed and implemented tiled layout and other improvements resulting in > 98% savings in render time.
· Led the security review for our "Copy Comments" feature using STRIDE threat modeling.
· Successfully led and mentored our team's Engineering Resident into a full-time role.

Education

Bachelors in Science, Computer Engineering
University of California, Davis

Certificates

Mining Massive Datasets with Distinction
Stanford University via Coursera

Machine Learning
Stanford University via Coursera

Links

vijayarunkumar.com
twitter.com/thekumar
linkedin.com/in/vijayarun
github.com/thekumar

Data Science Consultant
DeepDyve · Redwood City, CA

Jun 2015 - Dec 2015

Contracted for this scientific article publishing startup to help with search, retention, and discoverability.

· Designed and implemented the "Others also viewed" feature to rank related articles based on link analysis of sequential views by readers.
· Implemented a simple cookie based mechanism to track sequential views, and ranked the universal set using Hadoop MR

· Designed and implemented "More from the authors" feature to rank related articles based on the number of common authors.

Senior Web Engineer
Shutterfly · Redwood City, CA

Jun 2013 - Dec 2015

Senior Engineer on the Shared Services team, responsible for moving our monolithic codebase to a scalable microservices based one.

· Rearchitected our codebase to be more horizontally scalable with RESTful microservices.
· Designed and implemented Single Sign On and OAuth for API access between our brands.
· Led the effort around secure design practices and introduced STRIDE threat modeling to

engineering teams.
· Identified and mitigated potential secuirty risks to user data by migrating unsalted weakly encrypted passwords to a more robust BCrypt based solution.

Engineer
Bread Labs · San Francisco, CA

Mar 2012 - May 2013

Core member of 4 person engineering team, responsible for building our Ad Platform's backend APIs and Services using Groovy/Grails

· Built our product subscription billing, invoicing, and payment processing features. Integrated with Braintree Payments and built a pro-rated billing and credits system from the ground up.
· Designed and implemented our geo-targeted ads feature and integratied with MaxMind and

location based APIs.
· Other features implemented include: Campaign Pacing, Domain and Path based URL blacklists, Targeting/Filtering based on Facebook likes and Klout scores, etc.

Software Engineer
Mobclix · Palo Alto, CA

Jan 2011 - Mar 2012

Engineer implementing algorithms to optimize ad delivery and pacing at a Mobile Ad startup.

· Designed and implemented campaign pacing algorithms to optimize good outcomes for both mobile app developers as well as for Ad networks.

· Built REST APIs that allowed third party ad networks to configure their ad spend and manage demand and ad creatives on our platform.
· Maintained our developer dashboard, and liaised with dev teams at third party ad networks.

Computer Scientist
Adobe · San Francisco, CA

May 2010 - Dec 2010

Ported Flash to Android, RIM, and QNX devices as a member of the Flash Customer Engineering team.

· Ported Flash to work on Marvell chipset.

· Embedded with RIM/QNX teams to port flash to work with mobile firefox on the Blackberry Playbook.

SDE II / Senior Software Engineer
Microsoft (Tellme) · Mountain View, CA

Sep 2006 - May 2010

Engineer on Tellme Phonetop team, and later on the Windows Speech UX team where I built voice based search and control applications for mobile platforms.

· Led the prototype development of Tellme Speech Experience for Windows Phone 7, and designed and developed UI/UX flows and grammars for the Speech UX that shipped with Windows Phone 7.
· As a member of the phonetop team, built a Voice+Visual application platform that enabled us to build voice based apps across various mobile

platforms including Blackberry, Windows Mobile, and J2ME phones.
· Was a member of the committee that defined the spec for MobileML, the markup language used to build dynamic voice apps.
· Identified and mitigated potential secuirty risks to user data by migrating unsalted weakly encrypted passwords to a more robust BCrypt based

Software Engineer
Feb 2005 - Sep 2006

ebay · San Jose, CA

Engineer on eBay Stores, and K2 Search teams.

· Designed and delivered Related Searches and Stores 2.0.
· Spearheaded use of AJAX within the org, and prototyped a dynamic UX for authoring Store Pages.

· As part of a 20-person skunworks team, built a Product Search engine that indexed over a billion product review and shopping pages around the web.
· Implemented Map Reduce crawler pipeline feature to automatically detect and filter out site design/template elements from being indexed.

Software Consultant
Jul 2004 - Dec 2004

AOL (Spherion) · Dulles, VA

Engineer on Netscape Talkback Server.

Senior Programmer
Nov 2003 - Jul 2004

Accenture Technology Solutions @ ebay · San Jose, CA

Engineer on eBay Stores 2.0 and Seller Reports projects.

Projects

Creator and App Developer
Aug 2011 - Oct 2011

Fotoyaki

iOS photo editing app

· Featured by Apple on the iOS App Store.
· Ranked #2 in the Photos category for 2 weeks

· Reached #39 rank in overall downloads on the App Store

Creator and App Developer
May 2013 - Oct 2013

ZDO

iOS video filters and effects app with cool sketch and comic filters

· GPUImage based rendering pipeline

· Smooth scrolling UX with live effect previews

Creator and App Developer
Jan 2018 - Jun 2018

Remix / Mix.byCollab

Collaborative video editor on the web

· Real-time collaboration using Operation Transforms
· Web based timeline editor built using React JS.

· Preview and effect engine built using WebGL & FFMpeg.js
· Sync layer build using websockets connecting to a Java and Go gRPC backend.

Volunteer

Volunteer Teachning Assistant
Jul 2016 - Jun 2017

TEALS K-12

Teaching Assistant for an Introductory programming class at Gregorio Luperon High School for Science and Mathematics.

Volunteer Teachning Assistant
Jul 2018 - Jun 2019

TEALS K-12

Returned as a teaching assistant and taught CS concepts to high school students at Quest to Learn.