Vijay Arunkumar
Software Engineering Lead

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Palo Alto, California, US

Seasoned Software Engineering Lead. Curious about the cutting edge. Obsessed about keeping things 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 our 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

I was an engineer in the Enterprise Support Billing service team within AWS Commerce Platform org, where I was 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

I was an engineer on Dropbox Showcase and Paper Platform teams, where I was responsible for building UI components and product features, as well as for improving developer experience by streamlining our service and code dependencies. I was also responsible for improving Showcase's product reliability by implementing a comprehensive suite of Jest/Enzyme unit tests and Selenium/Capybara integration tests.

· Improved Showcase's test coverage from <40% to >80%.
· Delivered HIPAA Compliance for Dropbox Paper.
· Streamlined and unntangled bazel dependencies to improve build/test times.
· Built a shared service sandbox and sidecar proxy to vastly improve memory footprint on dev boxes.

Senior Software Engineer
Jan 2016 - Dec 2017

Google · New York, NY

As a Senior member of Docs Comments team (Docos), I was responsible for working with PM, UX, and Eng Managers to deliver collaborative features related to Docs and Comments from ideation to launch.

· Implemented "Instant Mentions" feature across all platforms (Javascript, Android, and iOS).
· Primary POC for Docs Comments iOS features.
· Designed and implemented "Action Items" for iOS.
· Delivered design for syncing Action Items with Calendar Reminders.
· Improved UX rendering performance by >98% on the web for Docs with 100+ comments.
· Led STRIDE modeling and security review for "Copy Comments".
· Dotted-line managed and mentored our team's Engineering Resident into a full-time role.

Skills

Cloud Infra
AWS
GCP
Firebase
Kubernetes
Terraform

Build/DevOps
Aspect
Bazel
Docker Compose
Webpack

Data
SQL
NoSQL
Map Reduce
Search

Frontend
React/Redux
MaterialUI
HTML5
CSS

Backend
Node
Express
Next.js
Apollo GraphQL
Prisma
REST
gRPC
protobuf
SpringBoot
Hibernate

Languages
Typescript
Java
Go
Javascript
Objective-C
Swift
C++
Python

Education

Bachelors in Science, Computer Engineering
University of California, Davis

Certificates

Mining Massive Datasets
Stanford University via Coursera

Machine Learning
Stanford University via Coursera

Deep Learning Specialization
Deeplearning.ai via Coursera

Links

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

Data Science Consultant
Jun 2015 - Dec 2015

DeepDyve · Redwood City, CA

I consulted for this scientific article publishing on their data mining efforts to help with search, retention, and discoverability.

· "Others also viewed" - Ranked related articles based on 3-gram link analysis of sequential views by readers.
· "More from the authors" - Ranked related articles based on the number of common authors.

· Implemented a simple cookie based mechanism to track sequential views.
· Implemented ranking algorithms on the universal set using Hadoop MR, along with a live update pipeline.

Senior Web Engineer
Jun 2013 - Dec 2015

Shutterfly · Redwood City, CA

As a senior Engineer on the Shared Services team, I was responsible for rearchitecting and moving our monolithic codebase to a scalable microservices based one.

· Rearchitected monolithic code into scalable RESTful microservices.
· Designed and implemented Single Sign On and OAuth for API access between our brands.

· Led Secure Design initiatives and introduced STRIDE threat modeling to engineering teams.
· Identified and mitigated potential security risk by upgrading unsalted user passwords to bcrypt.

Engineer
Mar 2012 - May 2013

Bread Labs · San Francisco, CA

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/Path based URL blacklists, Targeting/Filtering based on Facebook likes and Klout scores, etc.

Software Engineer
Jan 2011 - Mar 2012

Mobclix · Palo Alto, CA

As a member of 12-person engineering team at this Mobile Ad startup, I implemented features and algorithms to optimize ad delivery and pacing that optimized outcomes for both our mobile app developers as well as our Ad network customers that integrated with us.

· Built our campaign pacing algorithm.
· Built REST APIs for third party ad networks to configure their spend and manage demand on our platform.
· Maintained our PHP-based developer dashboard, and liaised with app developers and dev teams at third party ad networks.

Computer Scientist
May 2010 - Dec 2010

Adobe · San Francisco, CA

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 for Blackberry Playbook.

SDE II / Senior Software Engineer
Sep 2006 - May 2010

Microsoft (Tellme) · Mountain View, CA

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

· Prototyped Tellme Speech UX for WindowsPhone 7.
· Built UI/UX flows and speech grammars for the expereince that shipped with WindowsPhone 7.
· Built Tellme for mobile for Blackberry, Sprint Instinct, and J2ME devices

· Designed and implemented layout engine for Tellme on Windows Mobile 6
· Member of the spec committee for MobileML, the markup language used to build dynamic voice apps.

Software Engineer
ebay · San Jose, CA

Feb 2005 - Sep 2006

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
AOL (Spherion Consulting) · Dulles, VA

Jul 2004 - Dec 2004

Engineer on Netscape Talkback Server.

Senior Programmer
Accenture Technology Solutions @ ebay · San Jose, CA

Nov 2003 - Jul 2004

Engineer on eBay Stores 2.0 and Seller Reports projects.

Java Developer
Genentech, Inc (Tek Systems) · Vacaville, CA

Mar 2002 - Jul 2003

Engineer on the Vacaville IT and Logistics team (VITAL)

Software Development Intern
Microsoft, Inc. · Redmond, WA

Jun 2001 - Aug 2001

I interned in the Windows XP SystemsManagementServer team where I implemented thread pooling and worked on moving from a polling-based system to a notification based one.

Software Development Intern
Cisco Systems, Inc. · San Jose, CA

Jun 2000 - Jan 2001

Over the summer and winter breaks, I interned in the Enterprise Router testing team, where I built an internal website for tracking our team's projects and testing metrics.

Projects

Creator and App Developer
Fotoyaki

Aug 2011 - Oct 2011

I built a Photo filter and editing app to learn iOS development and Objective-C. And, it blew up!

· App was featured by Apple on the iOS App Store.
· Over 750,000 installs

· Ranked #2 in the Photos category for 2 weeks
· Reached #39 rank in overall downloads on the App Store

Creator and App Developer
ZDO

May 2013 - Oct 2013

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
Remix / Mix.byCollab

Jan 2018 - Jun 2018

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.

Creator and Engineer   Feb 2023 - Present
Datayaki

Currently working on a collaborative platform for building and sharing data analytics dashboards on the web.

· Serverless backend employing Firebase(Auth +   · React/Typescript frontend.
  Firestore)

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.