

Vijay Arunkumar

Palo Alto, CA

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<https://thekumar.github.io>

Mobile

iOS, GPUImage, Flutter

Web Front-end

React, Redux, Typescript, Javascript, GraphQL, HTML5, Google Closure, Service Workers, CSS.

Web Back-end

Node.js, Express, Apollo GraphQL, Prisma ORM, Java SpringBoot, GoMux, GORM, SQL (MySQL/Postgres), NoSQL (HBase/DynamoDB/Mongo).

Cloud & Distributed Systems

Firebase, AWS, GCP, Docker, Kubernetes, Terraform, REST, gRPC, Operational Transforms, CRDTs.

General

Service Oriented Architecture, TCP/IP, SQL & NoSQL, Deep Learning and Neural Nets, Map Reduce, Search, Recommender Systems and Data Mining.

Languages

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

Published iOS Apps



Fotoyaki
ftyki.com



ZDO
zdoapp.com

Profile

Software Engineering Lead specializing in full-stack product development and scaling systems from zero to 10^n. Curious about the cutting edge. Obsessed about keeping it simple.

Experience

Principal Engineer, Skiff

New York, NY / San Francisco, CA 04/22-01/23

- As senior member of technical staff, oversaw engineering design decisions to ensure that they scaled with user / feature / organizational growth.
- Led effort to improve our backend service's reliability and performance. Improved our service's p95 response time by ~20x and our Database's CPU load by ~100x by simplifying our schema and eliminating long running queries and transactions.
- Designed and implemented web3 wallet-based addressing for Skiff Mail and integrated with ENS.
- Designed and implemented in-house drip-campaign mailer to mitigate cost and privacy concerns.
- Unified our disparate GraphQL clients into a single library to streamline front-end app development between Skiff Pages, Mail, and Calendar.

Software Development Engineer, AWS Billing, amazon

New York, NY 04/20-4/22

- Improved workflows and processes used to bill our high-spend enterprise customers as part of the Enterprise Support Billing team within the AWS Commerce Platform group.
- Worked with cross-functional teams across departments to get buy in on new workflow for onboarding ES customers automatically to improve onboarding time from ~2 weeks to ~2 hours.
- Implemented code and process improvements in our monthly bill-run to improve speed, accuracy, and reliability of our calculations.
- Worked with PMs, TAMs, and Customers on resolving customer billing issues and inquiries.
- Liaised with cleared engineers in our SCIFs to bring about process improvements around code deployments and remote debugging of billing issues.
- Implemented features improvements in our billing dashboard built atop Airwolf, Amazon's React.

Senior Software Engineer, Dropbox

New York, NY 07/18-02/20

- As a full-stack engineer on Showcase team, designed and implemented React UI components.
- Implemented a comprehensive list of unit (Jest/Enzyme) and integration tests (Selenium/Capybara) for Showcase, and improved overall code coverage and testing rigor within the team.
- As a backend engineer on the Paper Platform team, delivered HIPAA Compliance for Paper.
- Analyzed and streamlined our Bazel dependency graph to vastly improve build and CI/CD times.
- Further improved devbox memory footprint by implementing a shared service sandbox and a sidecar proxy written in Go to aid with service discovery and to intelligently proxy calls.

Creator / Engineer, Mix.byCollab

New York, NY 01/18-07/18

As a solo effort, built a web based video editor that employed Operational Transformations to allow multiple users to simultaneously edit videos together. The stack employed:

- MySQL & MongoDB, Go, gRPC, and SpringMVC on the backend.
- React + Redux, Typescript, WebGL, FFMpegJs, Service Workers & WebSockets on the frontend.
- Kubernetes and Docker on GCP for infrastructure
- Bazel monorepo and Bitbucket Pipelines for build and deployment.

Senior Software Engineer, Google

New York, NY 01/16-12/17

As a senior member of the team, I was responsible for working with PM, UX, and Eng Managers to deliver projects from idea to launch, owning end-to-end design, project planning and implementation.

- Implemented the "Instant Mentions" feature across all platforms (Javascript, Android, and iOS).
- Was the 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).
- Delivered 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 security reviews for projects and features, including "Copy Comments" launch.
- Successfully led and mentored our team's Engineering Resident into a full-time role.

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Data Science Consultant, [DeepDyve](#)

Redwood City, CA 06/15-12/15

- Designed and implemented the “Others also viewed” feature to rank related articles based on link analysis of sequential views by readers.
- Designed and implemented the “More from the authors” feature to rank related articles based on the number of authors shared between them.

Senior Web Engineer, [Shutterfly](#)

Redwood City, CA 06/13-12/15

- 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.
- Designed and implemented the Store Catalog and Product Pricing services using Spring Boot.
- Led the effort around secure design practices and introduced STRIDE modeling to Eng teams.
- Mitigated security risks to user data by migrating unsalted weakly encrypted passwords to a more secure salted algorithm without requiring a password reset.

Engineer, [Bread Labs](#)

San Francisco, CA 03/12-05/13

As a core member of a four-person engineering team, I was responsible for designing and implementing our Ad Platform’s backend APIs & services using Groovy & Grails on Heroku.

- Designed and implemented our product subscription feature, with support for pro-rated subscriptions, invoicing, refunds, discounts, and payment processing using Braintree Payments.
- Built our geo-targeting feature using MaxMind, and the APIs needed for location search.
- Other features I built include: Campaign Pacing, Domain and Path based URL blacklists, Support for selecting ads/campaigns based on Facebook likes, and Klout scores.

Software Engineer, [mobclix](#)

Palo Alto, CA 01/11-03/12

- Designed and implemented algorithms for optimizing ad network allocations under each publisher, and for pacing the delivery of each ad campaign.
- Built the REST API third-party publishers / advertisers used to configure their ads on our exchange.
- Maintained our PHP based developer dashboard, and liaised with dev teams at third-party ad networks to help them integrate with our platform.

Software Development Engineer II, [Microsoft](#)

Mountain View, CA 05/07-05/10

Senior Software Engineer, [Tellme.](#)

Mountain View, CA 09/06-05/07

- Led the development of Speech Experience prototype on Windows Phone 7, and designed and developed UI/UX flows and speech grammars for the WP7 Speech UX.
- Worked on a Voice + Visual application platform for developing voice applications written in XML that worked across Windows Mobile, Blackberry, and J2ME phones on top of which “Tellme for mobile. Also helped define the spec for MobileML, the language used to author apps.
- Implemented said platform for Blackberry, Sprint Instinct, and other J2ME phones and led development for layout engine and renderer on Windows Mobile 6.5.

Software Development Engineer, [eBay](#)

San Jose, CA 02/05-09/06

Senior Software Engineer, [Accenture @ eBay](#)

San Jose, CA 11/03-07/04

- As member of the K2 Search team, built a map-reduce based site layout analyzer on top of Nutch and Hadoop to detect and filter out redundant styling elements and other unimportant content. I also implemented site specific content scrapers using XPATH heuristics.
- As member of Stores team, also implemented features such as “Related Searches”, and “Cross Seller Merchandizing” and moved the Stores codebase from C++/IIS based v2 architecture to Java/ WebSphere based v3 architecture.

Computer Scientist, [Adobe](#)

San Francisco, CA 05/10-01/11

Software Consultant, [Spherion Consulting @ AOL](#)

Dulles, VA 08/04-12/04

Java Developer, [Tek Systems @ Genentech](#)

Vacaville, CA 03/02-07/03

Software Development Intern, [Microsoft](#)

Redmond, WA 06/01-09/01

Software Development Intern, [Cisco Systems](#)

San Jose, CA 06/00-01/01

Education

University of California, Davis, CA

B.S. Computer Engineering, 2002

Coursera Specializations: Mining Massive Datasets, Machine Learning, DeepLearning.ai