

# Vijay Arunkumar

New York, NY

510.541.8740  
thekumar@gmail.com  
blog.vijayarunkumar.com

## Mobile

iOS, GPUImage, Flutter

## Web Front-end

Typescript, Javascript ES6, HTML5, React/Redux, Google Closure, WebGL, Bootstrap

## Web Back-end

Spring Boot, REST, gRPC, JPA, JDBC, Hibernate

## Cloud, Search & Data Mining

Solr/Lucene, Hadoop MapReduce, SQL, NoSQL (Mongo, HBase), Google Cloud Platform, Docker, Kubernetes

## General

Service Oriented Architecture, TCP/IP Networking, XML/XPATH/XSLT, RDBMS & ORM, Shader Programming, Deep Learning and Neural Nets, Recommender Systems and Data Mining.

## Languages

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

## Published iOS Apps



Fotoyaki  
ftyki.com



ZDO  
zdoapp.com

## Profile

Software Engineering Lead specializing in full-stack product development with a love for cutting edge technology and an obsession for design and usability.

## Experience

### Senior Software Engineer, [Dropbox](#)

New York, NY 07/18 - now

I'm currently working on the Paper Infrastructure/Platform team tasked with improving the developer experience for Paper Engineers and with making the code more modular and testable. I also worked on making Paper HIPAA compliant and prior to joining the Paper team, I worked on Dropbox Showcase as a Full Stack Engineer.

- › Designed and implemented React/Typescript components for Showcase product.
- › Implemented a comprehensive list of unit (Jest/Enzyme) and integration tests (Selenium/Capybara) for Showcase, and improved overall code coverage and testing rigor.
- › Enabled Paper for customers that required HIPAA Compliance.
- › Analyzed and trimmed Bazel package dependencies to improve memory usage and service startup time for developers.
- › Designed and Implemented a way to save memory on developer environments by offloading services to a shared sandbox, and wrote services in Go to aid with Service Discovery.

### Creator / Engineer, [Mix.byCollab](#)

New York, NY 1/18 - 07/18

I built a collaborative video editor on the web that employed Operational Transforms to allow multiple users to cut and edit videos together in real time. I handled all aspects of the project from UI design to infrastructure management. ([mix.bycollab.com](#))

- › Designed an efficient method for syncing hierarchical data and project state between clients using Operational Transforms and Implemented the Sync API/Service using gRPC and SpringBoot, and sync library in TypeScript.
- › Implemented a Web Socket connector service for routing calls from javascript web clients.
- › Implemented a REST service for persisting the data model in mongoDB and retrieving it.
- › Built editor UI using React, and a custom view/model state binding framework a la Flux for seamlessly handling state changes between user actions and server syncs.

### Senior Software Engineer, [Google](#)

New York, NY 01/16-12/17

I was a part of the Docs comments (Docos) team, where we oversaw all aspects of commenting and collaboration for the Docs and Drive suite of apps from implementing client and backend features to managing our own cloud infrastructure (deployment, uptime, and resource management). As a senior member of the team, I was responsible for working with PM, UX, and Eng Managers to design, scope, and deliver projects from idea to launch, in addition to implementing.

- › Implemented the "Instant Mentions" feature across all platforms (Javascript, Android, and iOS).
- › 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 process using STRIDE for our "Copy Comments" feature.
- › Was the primary POC for our iOS code for reviewing external teams' features, designs, and code.
- › Successfully led and mentored our team's Engineering Resident into a full-time role.

### Data Science Consultant, [DeepDyve](#)

Redwood City, CA 06/15-12/15

I designed recommendation algorithms for increasing active readership among this startup's users by suggesting similar articles that might be of interest to the user based on collaborative/content filters.

- › 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 system to collect data about linked articles, and performed ranking on the universal set using Hadoop Map Reduce.
- › Designed and implemented the "More from the authors" feature to rank related articles based on the number of authors shared between them.

# Vijay Arunkumar

New York, NY

510.541.8740  
thekumar@gmail.com  
blog.vijayarunkumar.com

## Senior Web Engineer, [Shutterfly](#)

Redwood City, CA 06/13-12/15

As part of the Shared Services Team, I was responsible for rearchitecting our codebase to be more horizontally scalable and for developing and maintaining RESTful web services.

- Designed and implemented Single Sign On and OAuth for API access between our brands.
- Designed and implemented the Store Catalog and Product Pricing services atop Spring Boot.
- Designed and implemented a method to migrate the passwords in our user records with a more secure hashing algorithm without forcing a password reset.
- Led the effort around secure design practices and introduced STRIDE to Eng teams.

## 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.

- Built our product subscription feature, with support for pro-rated subscriptions, invoicing, refunds, discounts, and a PCI-compliant payment processing system 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 more.

## Software Engineer, [mobclix](#)

Palo Alto, CA 01/11-03/12

I designed and implemented algorithms for optimizing ad network allocations under each publisher, and for pacing the delivery of each ad campaign. Also, as a member of the backend team, I built the REST API that third-party publishers / advertisers used to configure their ad preferences on our exchange. Additionally, I 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 2, [Microsoft](#)

Mountain View, CA 05/07-05/10

## Senior Software Engineer, [Tellme.](#)

Mountain View, CA 09/06-05/07

I led the initial development effort for creating the Speech Experience on Windows Phone 7, and was later involved in the design and development of the UI/UX flows, and speech grammars. Prior to that, I worked on a Voice + Visual application platform for developing voice applications written in XML that worked across Windows Mobile, BlackBerry, and J2ME. I worked on the versions for BlackBerry, Sprint Instinct, and J2ME phones, on top of which the "Tellme for mobile" experience was built, and also led development for rendering and layout on Windows Mobile 6.5. I was also a member of the committee tasked with defining the spec for MML, the language used for authoring apps.

## Software Development Engineer, [eBay](#)

San Jose, CA 02/05-09/06

## Senior Programmer, [Accenture @ eBay](#)

San Jose, CA 11/03-07/04

I was part of the team that built K2, an online search engine for finding products and reviews. I was responsible for building a map reduce job on top of Nutch and Hadoop that analyzed a sample set of pages from each website domain to detect and filter out layout and template features, thus allowing us to index just the actual content of each page. I also implemented site specific content scrapers using XPATH. Prior to that, I was part of the eBay Stores team, where I implemented features such as "Related Searches", and "Cross Merchandizing." I was also involved in the Stores 1.0 project, as part of Accenture, where I helped migrate the eBay stores product from C++/IIS architecture to their relatively new J2EE 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

## Education

University of California, Davis, CA

B.S. Computer Engineering, 2002