

# RAJIEV TIMAL

Software Engineering Director | Web, Data, Cloud, AI, Mobile, Product

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## EXPERIENCE

Software Engineering Manager 06/2025 - Present

### Memorial Sloan Kettering Cancer Center - Integrated Genomics Operation

- Leading Software, AI & Data Engineering at next gen genetic sequencing lab
- Architected and built custom LIMS & enterprise applications using Java and Spring Boot Framework, Node.js, React.js, Typescript, AWS
- Led discovery, design, software and cloud architecture, and development of new Lab operating system to support custom workflows and reporting with enterprise buy-in
- Built & managed data pipelines for genetic sequencing analysis and data delivery to internal and external stakeholders
- Created framework for Gen AI usage and RAG using AWS Bedrock
- Workflow automation using Python, Java and Apache Airflow. Splunk administration
- Managed petabytes of genomics data, including creating data ingestion and processing pipelines, data retention and disaster recovery plans
- Managed and optimized data delivery pipeline on HPC cluster.
- Mentored and coached team of software engineers
- Worked with cloud infrastructure teams to set up necessary infrastructure on AWS

Senior Director of Engineering, Digital 01/2023 - 04/2025

### Hospital for Special Surgery New York, NY

- Building and leading a digital engineering team within the #1 Orthopedic Hospital in the world
- Led development of a high-traffic surgical care guide Node.js/React.js/PostgreSQL app for patients used by 95% of patients undergoing surgery, as well as AI-Driven physician CV builder application
- Conducted 1:1's hiring, mentoring and coaching of a distributed and on-site team of engineers.
- Hands-on leadership, architecture & development of multiple applications. Tech stack includes AWS, Golang, Node.js, Typescript, Python, React.js, Swift, Kotlin, Android Java
- Developed a real-time messaging conversational AI chatbot, increasing patient pre-registration efficiency by 40%. Node.js, Typescript, PostgreSQL Led iOS and Android development for MyHSS custom app, serving over 10,000 patients, enhancing user engagement
- Developed extensible enterprise job runner with UI, with Golang, Node.js, Typescript, React.JS, Nest.js. Deployment using AWS and Kubernetes.
- Proactively leading Enterprise Architecture initiative across entire IT organization with 500+ employees
- Worked with Rev Cycle team on building out AI automations using Palantir Foundry to reduce insurance denials and increase prior auth approval
- Managed SaaS vendors (Twilio, AWS, etc.) ensuring compliance and cost savings of 15% in software expenditure. Managing capital and operational budget of \$1.6M
- Worked closely with Data and Integrations teams to plan and build out ETL pipelines to get on-prem data into cloud applications and for Epic Integrations
- Improved mobile app functionality by integrating with Epic MyChart Mobile SDK, enhancing user experience

Senior Director of Engineering, Consumer Digital Innovation 09/2020 - 01/2023

### Mount Sinai Health System New York, NY

- Architected and built a subscription & membership based patient/employer/provider platform that enabled a 60+ million dollar a year commercialization business within Mount Sinai
- Hiring, managing and leading a software engineering team with 20+ direct reports. Conduct 1:1's, coaching, leveling, etc. Built the engineering team from 2 engineers to 30+ targeted. Hired for support, QA, platform and product engineering teams and built out processes to ensure the efficient functioning of these teams. Vetted, signed and managed SaaS vendors
- Architected, built and deployed multi-tenant and multi-node event-driven backend to support a chatbot texting into "4-SINAI" to chat for care. Golang/Python/PostgreSQL/Twilio SMS/TwiML
- Increased user engagement by over 1000% by developing a digital front door and conversational AI chatbot for patient scheduling and remote patient monitoring using , Golang, React.js, PostgreSQL
- Enhanced response rate by 20% by leading and managing creation of customer service platform to triage and respond to SMS inquiries. Golang, Python, Node.js, React.js, PostgreSQL
- Managed \$5M engineering budget to optimize operational and capital expenditures
- Defined and met SLA's with 99% uptime for all applications built with a team of support engineers
- Worked with and influenced 1000+ member IT team across multiple portfolio items to ensure enterprise architecture met consumer business needs
- Created custom Mount Sinai Mobile application for iOS and Android with Epic SDK integration. White-labeled iOS and Android application development for employers.
- Delivered data insights by building 8 analytics dashboards and data pipelines for reporting
- Created API's that integrate with Epic EHR and MyChart

## LANGUAGES

English Native ●●●●●

## SKILLS

Agile · Native iOS Development ·  
API Development ·  
Native Android Development ·  
Mobile Engineering · AI Agents · React.js ·  
Next.js · Angular.js · DevOps · CI/CD ·  
Algorithms · Artificial Intelligence · AWS ·  
AWS ECS · Bots · Big Data ·  
Computer Architecture · Computer Vision ·  
Containers · Data Engineering ·  
Data Integration · Data Science ·  
Data Structures And Algorithms ·  
Data Visualization · Database Design ·  
Database Management · Deep Learning ·  
Docker · Elasticsearch · EMR ·  
Entrepreneurship · ES7 · ETL · Fargate ·  
Health Care · Golang · Nest.js · Python ·  
Ruby on Rails

## PROJECTS

### Skill: Mobile Engineering, Web & Data Consultant

05/2022 - 06/2023

Lead iOS app dev, implementing 1:1 video chat. Created backend API's in Node.js

Created AWS Redshift Data Warehouse and ETL Pipeline from cloud database using a vendor solution - <https://www.fivetran.com/>

- Data work lead the team to measure, iterate, and create a compelling story and grow rapidly. eventually leading to an acquisition of \$31.85 Million - <https://www.prnewswire.com/news-releases/motomova-completes-skillr-acquisition-to-complement-saas-product-suite-302186040.html>

### LiveryDesk: Lead Mobile Engineer, Co-Founder

12/2015 - 12/2016

Built real time white-labeled, cloud-based taxi dispatching software for iOS and Android with Passenger and Driver app.

- Company was acquired for \$20 million by logistics company.
- Increased analytics efficiency by 25% by streaming real-time location data to SQL database for processing.

## EXPERIENCE

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Senior Full Stack Engineer, Lead Full Stack Engineer, Software Engineering Manager 01/2019 - 09/2020

[Mount Sinai Health System](#)

New York, United States

- Built patient engagement solutions using Node.js, Golang, React. Grew into Eng. Manager.

Chief Technology Officer 08/2017 - 08/2018

[Gooroo - www.gooroo.com](#)

- Lead a distributed team of developers (NYC and South Korea) as well as 2 product managers and 2 UX/UI designers
- Built learning management system prototype for board of education that helped raise funding and acquire contracts with the NYC Department of Education. This was used by 1000+ students in partnership with the NYC Department of Education. Node.js, Python, PostgreSQL, MongoDB, Typescript, Golang
- Expanded tutor-student interactions to 50,000 monthly by enhancing app features across iOS, Android & Web
- Developed and executed data and analytics strategy. Increased user retention by 30% by implementing Lean Analytics funnels, KPIs, and metrics.

Chief Technology Officer 07/2015 - Present

[Readfeed](#)

Queens, NY

- Building, designing and maintaining scalable Golang, Node.js and Ruby on Rails API's
- Split monolithic Node.js application into microservices using Docker and Amazon ECS/Fargate Product owner and primary developer. PostgreSQL/MongoDB storage
- Designed, developed and launched iOS & Android online book club product and real-time conversational AI book club facilitator using an agile methodology
- Featured by Google. Acquired 40,000 users in 2 weeks. Built out data analytics warehouse and pipeline. Use Mixpanel and Google Analytics to funnel data into data warehouse
- Linux server administration and DevOps using AWS
- 60,000+ installs on Android Built 99% of both iOS and Android apps. Written Natively in Swift and Java/Kotlin
- Built out AI-powered book club facilitation

Lead Mobile Engineer 07/2015 - 10/2016

[Strivr, Inc.](#)

- Social Network for college students to give/receive help on campus. 20,000 + users.
- Built entire iOS app from scratch
- Managed Android application development
- Deeply involved with product

IOS Engineer 07/2013 - 10/2014

[Fuzz Productions](#)

Brooklyn, NY

- [www.fuzzproductions.com](#) (now [www.monstar-lab.com](#))
- Fuzz is an agile digital product development shop (web and mobile development)
- Made code changes and added major features to 30+ popular, high traffic apps while at Fuzz. Including NY Post, Wegman's and Fairmont Hotels iOS app
- Implement analytics frameworks into every iOS application I worked on. Mixpanel & Google Analytics
- iOS Project Lead. - [Weighttraining.com](#)(now [exercise.com](#)) iPhone App [#12](https://itunes.apple.com/us/app/weighttraining.com-free-workout/id559019054?mt=8) in Health and Fitness category within first week of launch
- Google One Today App - Ported iPhone version to iPad <https://itunes.apple.com/us/app/one-today/id740270200?mt=8>
- Used AWS SNS for push notifications
- Leading and contributing to 10+ other projects at Fuzz.

Full Stack Engineer 08/2012 - 07/2013

[Night Agency](#)

New York, NY

- Worked on dozens of client projects with technologies like Ruby on Rails, Node.js, MongoDB, MySQL, PHP, Elasticsearch, iOS, Android
- Night Agency is an agile digital product development shop (web and mobile development)
- Full stack iOS & Android mobile engineer and web engineer. Implemented designs and backend architecture of mobile and web applications. Built RESTful API's.
- Rapidly learned new technologies on the job

Spine Surgery Physician Assistant 01/2012 - 07/2012

[HHC - Metropolitan Hospital](#)

New York, NY

- Provided preoperative, post-operative, and intra operative patient care. Worked closely with orthopedic spine surgeons to diagnose and treat various spinal and neuromuscular diseases in the clinic and operating room settings.

## PROJECTS

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**Symple Symptom Tracker - Mobile Engineering Consultant**

12/2015 - 12/2016

Built out key iOS App functionality

- <https://www.sympleapp.com/>

**Guru'd LLC - Mobile Engineering Consultant & Product & Project Management**

10/2014 - 06/2015

Built and project + product managed iOS yoga app that allows yoga teachers to market yoga classes and accept payments.

**Roger Talk - iOS Engineering Consultant**

04/2015 - 06/2015

- Walkie-talkie mobile application
- Developed Key functionality in iOS app, Integrated analytics framework to measure performance
- Received \$1 Million in VC funding

## MEDIA LINKS

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Readfeed - Official Android Developers Blog Featured Post

<https://android-developers.googleblog.com/2016/10/readfeed-graduates-from-google-play-early-access-beta-program.html>

Readfeed - CNET Feature

<https://www.cnet.com/tech/services-and-software/readfeed-brings-online-book-clubs-to-android/>

Readfeed - TechCrunch Mention

<https://techcrunch.com/2016/09/01/google-plays-beta-testing-program-early-access-opens-to-more-developers/>

Readfeed - PC Magazine Mention

<http://www.pcmag.com/news/347519/google-expands-android-early-access-beta-program>

## EXPERIENCE

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Orthopedic Surgery Physician Assistant 06/2010 - 07/2012

[HHC-Lincoln Hospital Center](#)

Bronx, NY

- 24 and 48 hour solo weekend call on orthopedic surgical service and in ER
- Reduced shoulder dislocations, elbow dislocations, ankle fractures, all upper and lower body fractures
- Preoperative preparation. Diagnosed and treated medical and orthopedic illnesses under supervision of an orthopedic surgeon
- Orthopedically stabilized and treated level one trauma patients through wound irrigation, suturing, reducing fractures, casting/splinting extremities, and surgical booking
- Performed history and physical examinations
- First assisted in orthopedic surgery including knee and hip replacements, upper and lower limb fractures, and sports injury surgeries
- Provided preoperative, post-operative, and intraoperative patient care. Independently diagnosed and treated patients in orthopedic clinics under the supervision of an orthopedic surgeon. Preparation and administration of orthopedic joint injections
- Ordered and dosed a wide variety of medications including antihypertensives and anticoagulants

Orthopedic Surgery Physician Assistant 05/2008 - 03/2010

[Wyckoff Heights Medical Center](#)

Brooklyn, NY

- Surgical setup, prepping, scrubbing and draping
- Orthopedic reductions and splinting in the emergency and operating room
- Pre-op and post-op care and orders. Writing prescriptions in clinic and postoperatively
- Managed all patients on the orthopedic service, medically and orthopedically
- Independently closed up patients by suturing after major hip knee, and various other orthopedic surgeries
- Pre-op, intra-op, post-op and clinical care. Ordered and dosed a wide variety of medications including antihypertensives and anticoagulants.
- Cast and splint application.

Orthopedic Surgery Physician Assistant 09/2007 - 05/2008

[Coney Island Hospital](#)

Brooklyn, NY

- Assisted in dozens of surgeries; Pre-op, intra-op and post-op
- ER/floor consults, rounding on floor patients, managing patients in the orthopedic clinic
- Casting/splinting/and reduction of fractures and dislocations

General Surgery Physician Assistant 09/2007 - 05/2008

[Coney Island Hospital](#)

Brooklyn, NY

- Included intermittent coverage of Neurosurgery, Urology, and Plastic surgery services.
- Assisted in surgeries; Pre-op, intra-op and post-op. ER/floor consults, rounding on floor patients, managing patients in the orthopedic clinic. Casting/splinting/and reduction of fractures and dislocations.

Medical Records Clerk 03/2003 - 09/2005

[Prison Health Services](#)

Rikers Island, NY

Filing and organizing the internals of physical medical records of prison inmates

## EDUCATION

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M.S. in Computer Science 01/2009 - 01/2011

[NYU Tandon School of Engineering](#)

- Software Engineering I and II, Data Structures and Algorithms, Relational Databases, Computer Vision using machine learning, Interactive Computer Graphics(using OpenGL), Discrete Mathematics, Web Search Engines, Computer Networking, Operating systems, and Computer Architecture

MBA, Innovation, Entrepreneurship 01/2020 - 01/2023

[University of Illinois Urbana-Champaign](#)

- Innovation, Entrepreneurship and Digital Marketing Specializations, Strategic Leadership and Management, Managerial Economics, Business Analysis, Digital Marketing, Value Chain Management, Financial Management

Artificial Intelligence Professional Certificate 01/2024 - Present

[Stanford University](#)

- Natural Language processing with Deep Learning, Deep Generative Models, NLU

B.S. in Physician Assistant Studies 01/2003 - 05/2007

[St. John's University](#)

- I practiced as a Physician Assistant in Orthopedic Surgery for 5 years, actively prepping patients for and assisting in surgeries daily and seeing patients on an outpatient basis. Scrubbed in to hundreds of TJR's and fractures. Worked at level 1 trauma centers on call to ER.