

Vivek Raju

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Work Authorization: U.S. Permanent Resident (Green Card)

PROFESSIONAL SUMMARY

Senior Software Engineer with 5+ years of experience building scalable REST APIs, cloud-native systems, and event-driven architectures. Strong experience in NestJS, Laravel, FastAPI, PostgreSQL, Kafka, Redis, and AWS, with hands-on experience supporting React and React Native frontends. Championed production-grade systems for SaaS, healthcare, and video platforms with a focus on secure APIs, microservices architecture, and reliable asynchronous processing.

TECHNICAL SKILLS

Backend: NestJS, Node.js, TypeScript, Laravel, CodeIgniter, FastAPI, Odoo, PHP (v5.6+), Python, JavaScript

Frontend: React, React Native, Expo

Databases: PostgreSQL, MySQL, MongoDB, AWS RDS, MariaDB

Messaging & Caching: Apache Kafka, Redis, RabbitMQ

Cloud & Infrastructure: AWS (S3, SQS, SNS, Lambda, IAM, CloudWatch), Docker, Docker Compose, Infrastructure as Code (IaC), Pre-signed URLs, Linux

Security & Authentication: JWT, OAuth2, Role-Based Access Control (RBAC)

API & Architecture: RESTful APIs, Microservices, Event-Driven Architecture, Service-Oriented Architecture (SOA), System Design

Testing & API Validation: Postman, Swagger/OpenAPI, Unit Testing, Integration Testing, End-to-End (E2E) Testing, Functional Testing, Dev/Staging Validation

Integrations: Stripe, QuickBooks, Avalara, CyberSource, OrbiPay, Shippo, Wowza

Document & Media Processing: Puppeteer (PDF Generation), FFmpeg (Video Processing)

Search & Indexing: Elasticsearch

Dev Practices: Agile, Scrum, CI/CD (GitHub Actions / GitLab), Code Reviews, Performance Optimization, Mentoring, Technical Leadership

Compliance & Security: HIPAA-Compliant Healthcare Backend Architectures, PCI-DSS Secure Payment Workflows

DevOps, Collaboration & Project Management: Git, GitHub, Bitbucket, Jira, Zoho Projects, Confluence

WORK EXPERIENCE

Senior Software Engineer | IBIL Solutions | Aug 2021 – Oct 2025

Tech: NestJS, Laravel, Node.js, TypeScript, FastAPI, React/React Native, PostgreSQL, MySQL, MongoDB, Redis, Kafka, AWS (S3, SQS, SNS, RDS, Lambda), Docker

- **Architected and optimized** high-performance RESTful APIs using **NestJS** and **Laravel**, resulting in a **35% improvement** in average response times and a **20% reduction** in server overhead
- **Streamlined business workflows** by integrating payment, tax, and streaming services (Stripe, QuickBooks, Avalara, Wowza, Shippo), enabling automated billing processes that reduced manual operations by **60%**.
- **Strengthened system security** by implementing robust **JWT authentication and RBAC**, which successfully decreased unauthorized access attempts by **40%**.
- **Established scalable** asynchronous processing pipelines using Kafka and Redis (**50k+** events/day), ensuring high system throughput and responsive frontend experiences.
- **Drove team productivity** by **mentoring** junior engineers and improving code quality standards, increasing team delivery velocity by **25%**.
- **Defined and documented API** contracts between backend and frontend teams, reducing integration defects by **30%** and **accelerating feature delivery**.
- **Led technical** design discussions that reduced deployment failures by **30%** across **4** services.
- **Conducted API validation and functional testing** using Postman and Swagger, verifying request/response contracts, authentication flows, and error handling across development and staging environments before production releases.

Freelance Software Engineer | Remote | Dec 2020 – Aug 2021

Tech: PHP (Laravel, CodeIgniter), Python (FastAPI), React/React Native, Expo, PostgreSQL, MySQL, JWT

- **Delivered** custom Laravel + React business applications that improved client operational efficiency by **40%** through automation and dashboards.
- **Engineered** secure REST APIs using **JWT** and role-based access control (RBAC) for diverse business clients, streamlining user permission management and decreasing security-related integration defects by **30%**.
- **Deployed 15+** A/B tests on React-based landing pages, increasing conversion rates by **15%** and improving user engagement metrics by **20%**; findings presented directly to the CTO.
- **Worked** directly with clients to gather requirements, **architect solutions**, and deliver on tight timelines.

Software Engineer | Hafisoft Technologies | Dec 2019 – Dec 2020

Tech: Python, Odoo, CodeIgniter, PostgreSQL, MySQL, React/React Native

- **Programmed** Odoo modules powering school management workflows for **10k+** students across multiple institutions.
- **Optimized** PostgreSQL/MySQL queries within **AWS RDS** environments, reducing **user-facing** report generation time by **45%**.
- **Systematized** academic workflows (timetables, reports, attendance), reduced admin processing time by **30%**.

PROJECTS

ContractQ (AI-Powered CRM & Job Management Platform)

Role: **Senior Software Engineer**

Tech: NestJS, React, PostgreSQL, MongoDB, Redis, Kafka, Stripe, QuickBooks, AWS S3, SQS, SNS, Elasticsearch

- Designed and developed scalable REST APIs supporting multi-tenant CRM workflows for **1k+** businesses and **100k+** customer records, supporting React.js frontends.
- Implemented Stripe subscription billing, reducing payment failures by **40%** through webhook automation.
- Integrated **QuickBooks** for real-time accounting synchronization, modernizing financial data workflows and reducing reporting errors by **50%**.

Our Child's Life (HIPAA-Compliant Healthcare Platform)

Role: **Senior Software Engineer**

Tech: NestJS, React, React Native, Kafka, Redis, Stripe, AWS S3, PostgreSQL, MongoDB

- Transformed patient onboarding by developing secure REST APIs integrated with **NestJS**, **React.js** and **React Native**, reducing manual data entry for providers and ensuring **100%** HIPAA compliance.
- Built secure REST APIs with strict access controls, reduced unauthorized **PHI** access incidents by **60%**.
- Leveraged **Kafka** and **AWS S3** to automate background document processing, increasing system throughput by **30%** and providing real-time status updates to users via **React.js** hooks.

Liiighthouse (Video Social Marketplace Platform)

Role: **Software Engineer**

Tech: Laravel, Node.js, FFmpeg, Wowza, Avalara, Redis, AWS S3, AWS RDS (MySQL), MongoDB, Elasticsearch

- Orchestrated the backend infrastructure for a high-scale video platform using **FFmpeg** and **Wowza**, reducing average video transcoding time by **50%**.
- Constructed high-performance APIs for uploads and live streaming, yielding a **50%** improvement in video processing speed.
- Spearheaded an event-driven architecture using **Kafka** and **Redis** to process **50k+** background jobs daily, maintaining a **99.9%** job completion rate and consistent system throughput.

EDUCATION

- Master of Computer Applications (MCA) | Bangalore University | India | Aug 2017 – Jul 2019

CERTIFICATIONS

- Scientific Computing with Python – freeCodeCamp