

# Giridharan Pasupathi

Software Developer

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## Experience

**Software Developer - SurveySparrow** 05/2024 – Present | Chennai

- Architected decoupling of billing services from SurveySparrow into SparrowPay, moving 230 read paths across 65 files to 1 source of truth and removing data mismatches.
- Led cross-system subscription audit between SurveySparrow and SparrowPay, identifying 190 mismatched accounts across 2 datacenters and 7 root causes, driving 6 targeted fixes.
- Designed tenant onboarding UI replacing a 10-step manual script process with 1 guided workflow across microservices.
- Centralized quota and limit resets from multiple webhooks into 1 cron job, resolving 4 recurring stale quota defects.
- Hardened webhook pipeline for 25 event types with per-account Redis locks and a 30-field allowlist, blocking tampered payloads and resolving deadlocks.
- Optimized bulk feature provisioning with batched inserts and 20 parallel workers, cutting runtime from 48 to under 4 hours.
- Built Slack bot that monitors payment attempts for stolen and fraudulent cards, flagging over 10 suspicious attempts in real time for rapid account blocking.
- Automated 140 Playwright end-to-end test cases with AI agents across 5 modules, including signup, login, SSO, and 2FA.
- Migrated 35 billing plan scripts across 7 datacenters to a self-serve admin UI, letting product managers launch pricing plans without engineering help.
- Created cron-based email automation sharing usage insights with premium customers, driving 30% revenue retention growth and higher feature adoption.
- Orchestrated pause-payment workflow syncing Stripe and internal billing systems, keeping 100% subscription consistency during account suspensions.
- Delivered automated audit cron for superadmin usage overrides, protecting about \$50K in annual revenue from leakage.
- Launched 7-day free trial across all pricing plans with analytics tracking, increasing customer retention by 12%.
- Developed SparrowPay reconciliation job comparing subscription data across 2 systems daily, surfacing 400 mismatched accounts before customer impact.
- Shipped 200 merged pull requests and resolved 220 Jira tickets across 5 repositories spanning billing and payments.

## Technical Skills

**Languages:** JavaScript, Java, Python, SQL

**Frameworks:** Node.js, Spring Boot, Hapi.js, React, Sequelize ORM, REST APIs, Webhooks

**Databases:** PostgreSQL, Redis

**Payments / Infra:** Stripe, BullMQ, Docker, Cron Jobs, Database Migrations

**Testing / Observability:** Playwright, Micrometer, Prometheus

## Awards & Achievements

**Spotlight Award, SurveySparrow**

- Recognized for impactful contributions to the Billing & SparrowPay Squad, highlighting creativity, commitment, and measurable team success.

**Niral Thiruvizha Finalist, Tamil Nadu Government**

Qualified into top 50 teams out of 10,000 statewide.

**Competitive Programming**

LeetCode: Top 7%, CodeChef: 1481

## Projects

**WorkQueue, Java 21, Spring Boot, Redis**

- Engineered distributed job queue library in Java 21 on Redis with BLMOVE at-least-once delivery, bounded virtual threads, exponential backoff retries, dead-letter handling, and delayed scheduling.
- Implemented strict per-key ordering with concurrent processing of distinct partitions, lease heartbeats, stall recovery, and atomic Lua transactions, losing zero messages in crash simulations.
- Benchmarked 1,900 operations per second under a 10,000-item load, verified by 18 JUnit 5 and Testcontainers integration suites, with Micrometer and Prometheus metrics for depth, throughput, and failures.

## Education

**Bachelor of Information Technology,**

Sona College of Technology, Salem | GPA: 8.0/10

06/2021 – 03/2025