

PAWNEET SINGH

Staff Engineer 2

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📍 Bangalore, India

SUMMARY

Result-driven software engineer with **9+ years of experience**, specializing in system architecture and microservices. My career journey began at an early-stage startup, contributing to its growth from the ground up, and later expanded into a corporate environment as an Assistant Engineering Manager in the media domain. I bring comprehensive expertise in product development, enterprise architecture, cloud services, agile methodologies, and web-based applications, with a strong focus on optimizing performance and scalability in fast-paced settings.

EXPERIENCE

 Staff Engineer 2
CoinDCX 11/2021 - Present Bengaluru
A leading cryptocurrency exchange in India

Mercury: Monolith to Microservice

- Orchestrated High-Level and Low-Level Design for systematic decomposition of monolithic system into microservices, enhancing overall system architecture.
- Led POCs for standardization initiatives, including **centralized Protobuf generation, Lua script injection in Redis, and HTTP to GRPC transcoding** in API Gateway.
- Independently executed user and data migration strategies for transitioning from a monolithic system to microservices. Successfully migrated data for **18.5M users, including 950M wallet transactions and 2.72B orders** (archival and migration). Collaborated with the Data Engineering team to **migrate over 10B rows of non-user data**, including candlesticks and public data (DynamoDB and Postgres).

Iris: System Scaling for Futures Product

- Engineered Rate Limiting and Order Routing functionalities, **reducing order rejections by 3%, optimizing fund utilization, and minimizing net positions across sub-accounts**.
- Resolved critical P0 issues, increasing system stability and enabling scalability to **16 million users and \$100 million in daily volume**.

Feature Development

- Led development of key features such as **SIP, Earn, Futures, and On-Demand P&L reports, including portfolio insights** and performance metrics like 1D and 1W returns.

Performance and Reliability

- Optimized public APIs, **reducing latency by ~30%** through Cloudflare, Nginx, and mobile caching, significantly reducing server load.
- Reduced **Futures Read API latencies by 50ms and decreased CPU and memory usage by 12%** through the implementation of a write-through cache, replacing ORM with raw SQL queries, and eliminating object marshalling.

Platform Engineering

- Designed and implemented **in-house Remote Config Service, replacing Firebase, to handle 100 requests/sec concurrently**.
- Managed migration of infrastructure from Elastic Beanstalk Amazon Linux 1 to Amazon Linux 2, ensuring timely upgrades and issue resolution.

EDUCATION

Bachelor of Technology

 GGSIU
08/2012 - 08/2016

SKILLS

Ruby on Rails	Python	Go (Beginner)
Postgres	MySQL	DynamoDB
MongoDB	Redis	SQS Kafka
Microservices		Distributed System
AWS/GCP JIRA		

SOFT SKILLS

Project Management	Mentorship
Problem Solving	Leadership
Team Management	

INTERESTS

- 💎 Reading books
- 💎 Playing Badminton and Table tennis
- 💎 Trekking



Assistant Engineering Manager

Disney Star TV Network 02/2020 - 11/2021 Mumbai

A major player in the Indian entertainment industry

- **On-air fetch microservice:** Event-based service to collect data and create jobs for multiple applications, optimizing bandwidth utilization and ensuring data consistency.
- **Single Client Optimizer:** Led the project, leveraging machine learning to generate and recommend proposal grids with Sales Units for over 40 major Star clients across 3 channels.
- **Sirius microservice:** Proposal management, allowing multiple proposals to be handled simultaneously with role-based approvals and detailed tracking reports.
- **Rating service:** Rails and Golang-based microservices to concurrently fetch daily, weekly, and monthly TVR ratings from KYLIN cubes, serving as critical data sources for other modules.
- **Price Recommender:** Python-based microservice that extracts data from BigQuery to aid in generating recommended prices for sales units within Star's main application.
- **Platform initiatives:** Migrated services from AWS to GCP, ongoing Elasticsearch integration, and performance optimization initiatives.



Technical Lead

QuickCompany 02/2016 - 01/2020 Delhi

- **Scraping Architecture:** Created AWS-based architecture, fetching over **85M data points monthly**.
- **Cross Ministry Business: Elasticsearch based search,** facilitating comprehensive data searches across Companies, Trademarks, Patents, and Legal Data.
- **Data Visualization:** Created data visualizations using Highcharts for site and CRM metrics, enhancing reports on sales, operations funnels, and statistics.
- **CRM:** Designed a robust CRM system featuring a lead generation funnel, event-driven email template engine, and integrated communication tools (SMS, emails, call recordings) to track KPIs like turnaround time.
- **PDF generator:** Real-time PDF generation for **data reports using WKHTMLTOPDF**, enhancing accessibility and user experience.