

# KUNAL KUMAR BARMAN

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[GitHub](#)

[Portfolio](#)

[LinkedIn](#)

## Education

• Indian Institute Of Information Technology Kalyani | B.Tech (CSE) | 8.75

Aug 2018 - June 2022

## Skills

Java | Spring Boot | Kafka | Sqs | NoSql | LLM | OpenAI | Langchain | C++ | Data Structure and Algorithm | Python | Django  
OOPs | C | Linux | Sql | Git | PostgreSQL.

## Work Experience

**Full-Time | CRED | Engineer (Backend)**

April 2023 - present

- Part of a **CRED UPI Payment Platform Team**.
- UPI Innovations: Developed Aadhaar-Based UPI MPIN Setting, UPI Autopay, Self Bank Money Transfer, CC on UPI, PPI instrument on UPI, Multi psp and Outage handle feature for multi psp.
- UPI Collect Request Migration: Moved collect request functionality from a monolithic service to a dedicated UPI service, improving system efficiency and reliability. Added collect request interstitial, **leading to a 5% increase in SR for collect requests**.
- Multi-PSP Enablement: Designed and implemented multi-PSP processing, enabling payments across multiple providers instead of a single provider, improving UPI SR and system reliability during provider downtimes and generates more than **2cr of revenue till now**.
- **Improved CC on UPI linking, leading to an increase in linking volume and a rise in SR from 65% to 79%.**
- UPI Onboarding Cost Optimization: Eliminated redundant network calls, reducing **Redis costs by 50% and lowering onboarding latency**.
- Goodwill Refund Reduction: Identified and resolved a refund process flaw, reducing **GWR from 40-50L/month to 10K/month by fixing the issue and backfilling data for 17M users**.
- Testing & Reliability: Led unit and service-level test adoption, reducing QA effort and improving deployment confidence. Enhanced error logging, alerting, and user-facing failure messages. Addressed thread leaks by implementing an executor service, preventing potential outages.
- Workflow & Infrastructure Improvements: Deep-dived into Redis vs. DynamoDB caching for CC UPI serviceability, which **reduces error rates from 5.4% to 2.74% and improves CC on UPI Payment SR from 76.5% to 90.97%**.
- Independently explored and created a **platform to resolve the customer issue using Langchain, OpenAi, loki, vector db** where anyone can just ask the issue and within 5 min it query different places and result the outcome. It reduced work of 1hr to 5 min for our on-call folk and increased productivity..

**Tech Stack** - Java, Spring boot, Git, Mysql, Rest Api, Redis, Caching, Langchain, LLM, Kafka, Sqs

**Tools**- IntelliJ, Data Dog, Data Bricks, Jenkins, Jira, Postman, Locust, Charles, Github, Cursor, cline, openAi, Vector db..

**Full-Time | Nurture.Farm (UPL subsidiary) | SDE (Backend) | 9 Months**

July 2022 - March 2023

- Involved in multiple services which includes payment, user, auth and payout in **Platform Team**.
- Improved the payment status to enhance customer visibility, thereby positively impacting the user experience
- Enhanced the team's debugging efficiency by implementing latency and counting metrics along with alerts.
- Transformed a monolithic service into a user service microservice, successfully completing all migrations and optimizing latency. Also, actively contributed to canary deployments.
- Build CI / Cd pipelines in Jenkins and Spinnaker and Set up the Jenkins rule for checking the unit test coverage.
- Wrote unit tests achieving 60-70% coverage across multiple services and addressed thread leaks, which could lead to thread outages, by implementing an executor service.
- I organized knowledge sharing sessions, delivered monthly tech reviews on behalf of my entire team, and provided mentorship to interns.

**Tech Stack** - Golang, Java, Grpc, Git, Jenkins, Mysql.

**Tools**- IntelliJ, Golang, Grafana, Prometheus, Jenkins, gitlab, Spinnaker, Jira.

**Internship | Tata 1mg | SDE (Backend) | 6 Months**

Jan 2022 - July 2022

- Worked with the **Cart Flow Validation team in the payment vertical**.
- Worked in a Auth service to write a **logic for syncing the Tata Data with 1mg User base**.

- Fixed the **bug of Partial refund calculation** for the CSC (Common Service Centres) , Wrote a change for a **bulk credit of 1Mg cash** for Tata + 1Mg users.
- Written a bash script of **git pre-commit hook** for testing of a python code style using pycodestyle and bash script of **git pre-push hook** for pytest coverage for defined test cases and documented them.
- Build an **end Point for the activity of neu coins , Earning on orders** for Customer Service-Console page and 1mg app reward earning page.
- Resolved **400+ on call issues and some PROD bugs** related to payment service (1Mg in Tata neu + 1Mg).

**Tech Stack** - Python , Sanic , Git , PostgreSQL , Git Hooks , Docker , kubernetes.

#### Internship | MAQ Software | Software Engineer | 2 Months

May 2021- July 2021

- Worked on an application for our largest client which aims at bringing all distributed reporting streams into a single interactive framework.

**Tech Stack** - Python, Azure DevOps, Azure Databricks, SQL, Power Bi.

#### Internship | Algoladder | Backend Developer | 3 Months

Jan 2021 - April 2021

- Created the **Restful Api** of the live web application from scratch, and added new features. Implemented **CRUD operation and improved the UI/UX** of the admin panel.

**Tech Stack** - Django Rest Framework, Django, Heroku, HTML, CSS, sqlite3, web scraping, js

## Projects

#### Republic Of Coders | Web App | [Git App](#)

Mar 2021 - July 2021

- It is an E-library which contains books, notes, regular updates of Competitive Coding Contest, Learning content for Dev and Cp with daily updates of the problem using a cron job. Users with credentials can upload and edit data.

- **Tech Stack** - Django, MongoDB Atlas, code forces API, clist API, HTML, CSS, javascript, web cache.

#### Pocket Medical | CNN Model | Web App | [Git App](#) [Cnn-Model](#)

Dec 2020- Mar 2021

- Trained CNN model with Wound/Cuts images data with 93.7% accuracy and merged with a web application with features like - Detecting severity, Finding near(hospital, medical ), QR code info, Save Your medical record.
- Test id: rishu, password: asghasgh

**Tech Stack** - Django, CNN, Keras, TensorFlow, pillow, pandas, here map API, geocoding, Deep Learning.

## Academic and Extracurricular Achievements

- **Qualified for Asia Regional Amritapuri ICPC 2020** with 430/3050 in the preliminary round.
- **Pune-Gwalior Regional ICPC Round Rank 222/700.**
- **Achieved 3rd position in CodAcharya 2021** (Inter College Coding competition).
- **Google HashCode 2021 India Rank:- 807/3913 and Global Rank:- 2982/9004.**
- Participated in **100+ online contests** collectively on different sites like CodeForces, CodeChef.
- Solved **1300+ problems** collectively in different sites like CodeChef, CodeForces, Leetcode, Binary Search, GFG, HackerRank, cses.fi..
- **Won 1st position in Version Beta hackathon under code Asylum Category.**
- **Runner up in Unscript Hackathon 2k20.**
- Qualified in the first round of google code jam 2020 [42 pts.](#)

## Positions of Responsibility

- Mentored juniors of my college.
- Institute Innovation Council (IIC) - IIIT Kalyani - Member