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

C++ | Data Structure and Algorithm | Java | Spring Boot | grpc | Python | Django + DRF | OOPs | C | Linux | Html5 | CSS3 | 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%.**
  Tech Stack - Java , Spring boot, Git ,Mysql, Rest, Redis, Caching.
  Tools– Intellij, Data Dog, Data Bricks, jenkins, Jira, Postman, Locust, Charles, Github.

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, Goland, 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