

KARTIKEYA RAJNISH PISE

SOFTWARE ENGINEER

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

PROFESSIONAL EXPERIENCE

DUNZO - GOOGLE BACKED STARTUP
BACKEND DEVELOPER

BANGLORE, INDIA
APR 2022 - Present

- Technologies Used: **Golang, Django, Redis, Kafka, Postgres, MongoDB, Docker, Kubernetes, GCP(pub/sub, cloud Scheduler, cloud function, GKE)**
- Dunzo is a hyper-local delivery platform that guarantees 19 min delivery where people can order any kind of household items from food, groceries, clothes, stationary, medicines, etc from any Dunzo store or any store of their choice. Dunzo also provides a delivery service wherein users can deliver or order any item from anywhere in the city. I am a part of the b2b team of Dunzo Merchant Service which helps small-scale and large-scale businesses like MacD, Licious, Magic pin, Reliance, etc to schedule and fulfill their deliveries to their customers.
- Worked on Multi-Threaded Applications in Golang and Django.
- Delivered a project named RIL Promo which involved creating a backend system to support partial returns of promotional items.
- Took **absolute ownership** of a project named "Demand-Curtailment of Orders" and "Rain Mode" which included a feature wherein the operators can create blockers in the system due to which orders cannot be scheduled in a chosen city and area during a specified time due to reasons like high demand, unavailability of delivery partners, excessive rain thus improving **customer experience**.
- Tweaked the System to support "Delayed Discounted Delivery" which enabled merchants to schedule discounted delivery at a later point in time which enabled dunzo to batch the orders and fulfill them simultaneously at the same time which resulted in a significant increase in dunzo's profit margin.
- Repaired the monthly Dunzo invoice generation System which was failing due to pod failure as a result of overwhelming data processing in memory. The Repair included optimizing database queries and processing batched data in chunks parallelly to calculate the aggregated data for invoices.
- Optimized throughput of certain services by optimizing database queries, using appropriate indexes, and processing the data parallelly.
- Every Project work included analyzing the **PRD** (Product Requirements Document) given by the business, creating a **TRD** (Technical Requirements Document) with detailed HLD, LLD, dependency issues, and impact on the system, migrations, release flow, etc, and getting it thoroughly reviewed by Tech Leads.
- Mentored an Intern during my tenure.
- Got an **appraisal** immediately after 3 months of joining for excellent performance.
- Learning Experience: **Event-Driven Microservice Architecture, Idempotency, Design Principles, Code hygiene, Multi-Threading, Asynchronous Systems, HLD, LLD, 12-factor App, Mentoring, 3-layered Architecture, CAP Theorem.**

AMAZON
FULLSTACK DEVELOPER

HYDERABAD, INDIA
AUG 2021 - APR 2022

- Technologies Used - **SpringBoot, React (Typescript), DynamoDb**
- AWS Services Used - **ECS and Fargate**, S3, SNS/SQS, KMS-CMK, Cloudfront, route53, **Lambda, API-Gateway, Load balancer**, CloudWatch, **AWS CDK**.
- Part of Project Santos at Amazon which helps merchants to build their own Virtual shops.
- Shipped clean and maintainable code following **SOLID Design Principles** and **strict TDD**.
- Built Key UI Components and corresponding backend to enable Customers to view Products and add them to the cart.
- Implemented Automatic Rollback on Failure, Web-Application Firewall, and End to end **TLS termination** to Enhance Security.
- Implemented Logging, and Alarms on AWS CloudWatch in production - Logging and Monitoring.
- Enabled Backend Services with **Throttling** to Prevent **DOS Attack**.
- Listed in **Santos wall of fame** for resolving many tickets in a short time span.
- Learning Experience: **Agile Development, CICD, TDD, Object Calisthenics, Distributed systems, Containerisation, Serverless, SQL and NoSQL databases, Event-Driven Architecture, Object-Oriented Programming, MVC Architecture**.

WEATHERNEWS INC
FULLSTACK DEVELOPER

OSAKA, JAPAN
MAY 2020 - JUL 2020

- Technologies Used: **Node.js, Perl, Javascript, PostgreSQL**
- Part of the Server Engineering team responsible for handling and maintaining the database servers and web servers.
- Created a web portal to visualize and download data stored across different servers.
- Created an Employee management Portal for viewing, Uploading, and Editing employee information.
- Added password policies on different registration pages to enhance security.
- **Improved display speed of web pages** by optimizing data transfer from the backend.
- **Reduced Latency** of the system by optimizing database queries.
- Created a Web Portal for database synchronization between different systems with a click.
- Created a Web Application that enabled sys-admins to view/download structured user-info
- Learning Experience: **On-Premise Networks, Socket Programming**.

EDUCATION

IIT ROPAR
Btech, Computer Science

PUNJAB, INDIA
2017-2021

TECHNICAL SKILLS

- AWS, GCP.
- Golang, Node.js, Spring/Spring-Boot, Django.
- Linux, Git, Docker, Kubernetes, Jenkins.
- MySQL, Postgres, MongoDB, Redis, Kafka, Zookeeper, etcd.
- HTML, CSS, Javascript, TypeScript, React.
- Python, Java, Perl, C, C++.

RELEVANT COURSES COMPLETED

- Data Structures and Algorithms
- DBMS, OS, Networking
- AWS Technical Essentials
- Developing on AWS
- SpringBoot(John Thompson)
- Node.js (Mosh Hamedani)
- React (Mosh Hamedani)
- Django (educative.io)
- Web Application and Software Architecture 101 (educative.io)
- System Design (Algo Expert)

ACADEMIC PROJECTS

E-Commerce Backend - Golang, Postgres, Docker [Git Link](#)

Created an Inventory management System for an E-commerce backend using a clean Architecture and following all the standard design Principles. The backend has APIs for viewing, adding, buying products, Recommending top products, etc. Key points about the application:

- All Api's are **Idempotent**
- Wrote a highly testable code wherein all the components communicate with each other using **interfaces**.
- Used MVC pattern and segregated the application into **3-layered Architecture**.
- Wrote a code that is **Modular, Maintainable, and Decoupled**.
- Mocked all the dependencies for **Unit Testing**.
- Achieved more than **90%test coverage**.
- Independent of frameworks, databases, and any external agency.
- Followed SOLID Design and **Dependency Injection** Principles.
- The application is **stateless** and **thread-safe** to allow concurrent requests

WhatsApp Clone - MERN Stack Build

- Created A WhatsApp clone.
- Supports **Real-time Database** operations (to update messages in real-time).
- Used **Pusher** to make MongoDB Real-time.
- [React Frontend Git Link](#)
- [Node Backend Git Link](#)

RISC-V Assembly Language Simulator - Python, javascript.

[Git link](#)

- Advanced RISC V simulation software.
- Converts assembly instructions to machine language.
- Supports Pipelining forwarding, stalling as well as branch prediction.

KD-Trees - Data Structures, C++

[Git Link](#)

- Implemented a 2-d tree that can efficiently search 2-dimensional geometric data.
- Supports K nearest neighbors (KNN) query and range queries.

Consistent Hashing - Data Structures, Python

[Git Link](#)

- Implemented **consistent hashing** for optimizing Database queries.
- Consistent Hashing is a distributed hashing scheme that operates independently of the number of servers or objects in a distributed hash table by assigning them a position on an abstract circle, or hash ring. This allows servers and objects to scale without affecting the overall system.

For further information on other projects click [here](#)

SOCIAL WORK AND POR

Served as Fund-Raising-Executive [BloodConnect](#) which is a social organization led by youth of India and originated at IIT Delhi. We aim to eliminate the blood shortage by supplying blood to blood banks all over India.

Activities:

- Organize frequent Blood donation camps
- Conduct Awareness Sessions.
- Supply blood to blood banks.
- Raise Sponsorships and funding for financial assistance.

KEY ACHIEVEMENTS

- AIR 1633 in all India entrance test for IIT's
- Cleared KVPY(Kishore Vaigyanik Protsahan Yojana)
- State Level Chess Player
- Cleared Level-3 harmonium Exam