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Summary

- **6+ years of experience** in designing and developing **Large Scale Distributed & Concurrent Systems**
- Solid foundation in designing a messaging app with **100M+ users (10M+ DAU & 1B+ messages/day)**
- Solid foundation in designing payments backend with **1M+ transactions/day**

Experience

Hike Messenger

Delhi

Sr. Software Developer

May 2014 - Present

- Working in **core backend team** of hike **responsible for entire end-to-end backend of messaging for 100+ million users**. Have headed & **architected several projects from scratch** from the initial days of hike. Have also **scaled & re-architected** several parts of the systems in my tenure to **handle exponential growth** seen by hike both in terms of **messaging and number of users**
- **Lead the Architecture and Implementation** of the following features' **end-to-end backend**
 - **Hike Payments - Hike wallet**, integrating merchants like **Hike Recharge, Zomato**, etc, **Blue packets** - a fun way of micro-payments, integrating with **Payment Gateways**, automating **reconciliation & settlement**, security & CS front-end & tooling
 - **File Transfer** - with **pause/resume** via **chunk uploading**. Further improved the user experience by **super fast uploading** of existing content via **MD5**
 - **Secondary Message Store** - Brought this concept for **mass campaigns to optimise storage**. A Redis backed storage layer to deliver campaigns and other low priority messages
 - **DX Framework** - A **zookeeper** based **Rule Engine** for schedule messages/system packets delivery to the user at D0,D1,DX, etc. at runtime. Rules included specifying device details, new user/returning user checks, upgrade, etc. This empowered PMs in **feature rollouts & experiments**
 - **Natasha** - A Bot which provides **services like wiki info, hike caller, weather info, fake call**, etc & to a partner to chit-chat when you're bored.
 - **User Signup & Onboarding** - **OTP & Missed call** based number verification system for user on-boarding
 - **Reward Campaigns** - for user growth which provided **2X increase in DAU**. The campaigns included rewarding both users by inviting someone on hike, or by performing certain actions (like engaging with other users). **Integrated** with 3rd party recharge partners like **PayTM, Oxigen**
 - **Pre-activation Service** - to perform **experiments/monitor & attribute user behaviour before signup**
 - **Multidevice support** - for **Hike Web**
 - **App Migration** - **Secure & Seamless Migration** from old to new Hike app
 - **Message Tracking Framework** - for **message reliability**. Working closely with the Data Analysts & Product managers & continuously monitoring & solving user issues around messaging
- **Live Database Migrations** - Did the following live DB migrations efficiently with data checks and **Zero downtime**
 - **Address Book** - Migrated from **Mysql to HBase** & subsequently from **HBase to Big Table (BT)** along with a redis based cache layer
 - **Timeline's stories** - Migrated from **HBase to BT**
 - **Offline Message Store** - Migrated from **MongoDB to HBase** during live messaging. Users were migrated in batches. This could handle **2X load** of the original cluster
- **Service Integrations**
 - **Push Notification Service (PNS)** - Integrated with **APNS(iOS)/FCM(Android)** for proactively reaching client for message delivery & keeping the **end-to-end messaging latency low**
 - **Cloudinary CDN** - **Improved client latencies** significantly by **serving images and videos through CDN**. Earlier implementation included serving through app servers via S3. Also adapted **network based video quality streaming via CDN** to improve overall user experience
- **Micro-Services Architecture**
 - Lead efforts in moving from **monolith to micro-services** based architecture. **Exposed lot of micro-services** such as block, friends, Send-Mqtt, Prey, Addressbook **on thrift** to align with service oriented architecture across teams. **Converted redundant code to libs** across micro-services.

BlackNGreen

Gurgaon

Software Developer

Jul. 2013 - Mar. 2014

- Developed a platform which allows the development of custom IVR(Interactive Voice Response) using drag-n-drop. It is also equipped with a scheduler for OBD(Out Bound Calls).

Skills

Languages	Java, Python, C, Shell, Android(Basic)
Databases	MySQL, MongoDB, Redis, HBase, Big Table
Frameworks	Spring, Hibernate, Django, Flask
Technologies	Netty, MQTT, HTTP, Zookeeper, WebSocket, Thrift, REST, Kafka
Cloud	Amazon Stack (EC2, S3, SNS, SQS), GCP Stack (Compute Engine, Big Query, GCS), Firebase (FCM)

Awards

- Won **Uber hackathon** by integrating their APIs in hike & providing an **MVP of Uber's services within hike**
- Won **Hike hikeathon** by making an MVP of one of the most requested feature - **Number Migration**