Prakhar Mishra
E-mail: prakhar1467.11@bitmesra.ac.in Tel: 7291881192

SUMMARY

- Achievement-driven Software Engineer with ~4 years of experience in startup and product-based companies.
- Skilled in creating distributed, scalable and robust software systems and conducting insights discovering studies aimed to actualize and enhance business processes.
- Knowledge of core concepts of computer science such as Data Structures and Algorithms, Lld, Hld.

Key Skills: Python, C++, SQL, JavaScript | Django/Flask | Angular, React, Bootstrap, Material | Git | Redis, Celery, Rabbitmq, Unix.

Work Experience

Sr. Software Engineer	**Airtel**	**Dec 2019-Present**
Software Engineer	**Airtel**	**April 2018-Dec 2019**

CDWH - Call Data Record Portal

Use Case: Law enforcement agencies send information such as contact/imei/imsi/cell tower/landline etc. of a potential perpetrator and want complete call data records to carry out investigations.

- At airtel, we have enormous and ever increasing cdr data stored and distributed in various different data-sources such as Oracle Exadata, Abinitio etc. Our aim was to create an architecture which can make exhaustive use of parallel and distributed computing to provide CDR in minimum possible time and cost.
- We created our backend in Python/Flask, used celery as distributed task queue and rabbitmq as our message broker. Every request is sub-divided according to data-source and then equal time frames and sent to 'worker' servers which run queries in parallel. After all workers respond with their results, data is combined and stored in compressed form to FTP server.
- By using Flower, we monitor each worker and every task and can keep track of worker load and health check of entire system. This whole architecture allows us to scale and add hardware without making any complication to existing workflow.

CDWH - Subscriber Data Record Portal

Use Case: Law enforcement agencies require subscriber's personal information such as name, address, govt. id, nationality etc. through their contact for investigation purposes.

- Developed a web application using Python/Flask which accepts single prepaid/postpaid/DSL number or a bulk input from a file and returns a web view as well as output as file in different formats such as csv/excel/pdf etc.
- In a massive database which contains more than $4*10^9$ customers data, brought down a single query's execution time from > 6 seconds to an average of 0.3 seconds by using data distribution and sharding techniques.
- Ensured a highly available environment for the application which has ever increasing customer data and at the same time maintaining good consistency for the whole system.

CDWH - Cyber Swachhta

Use Case: Identifying bot/malware infected devices by the data shared by CERT-IN (http://www.cert-in.org.in) which includes timestamp and the IP address of the infected devices and then notifying device customer to take appropriate steps to remove virus and to take additional remedial measures to prevent infection for the future.

- Developed a web application using Python/Flask is which takes cert data as an input, divides the input into equal subsets and runs parallel crons on them.
- For each timestamp and IP address, we retrieve the DSL ID of the device and then fetch the customer's email address registered to particular DSL. We send an email to the customer from Airtel SMTP, telling them appropriate preventive measures to take to remove infection. Application uses redis as a bridge between application and cron process to enable users see live update happening in cron.
- The complete automation of the project enabled us to process 400% more data per day and also saved 40 lacs to company within 3 months of my tenure.

Software Engineer	**KickstartJobs Human Capital Pvt. Ltd.**	**Jan 2017–Apr 2018**

- Kickstart Jobs is an entry level Blue and grey collar hiring platform, where we provided employment to 10,000 people and scheduled around 500-1000 interviews daily to various companies spread in Delhi NCR region.
- Our Tech stack contained Python/Django in backend, angular/material in the front-end and PostgreSQL as db. We used microservice architecture to deploy various desktop/mobile apps such as Kickstart Backend, Kickstart Interview app, Kickstart Leaders app, Payments app, E-Wallet to facilitate seamless interviews and hiring for employers and candidates.
- Generated market leads for the company by scraping company data from various websites on the internet which resulted in 40% revenue increase in 3 subsequent months.

Software Engineer	**Cubical Laboratories Pvt. Ltd.**	**Oct 2015–Nov 2016**

- Designed and developed Cubical Internal Dashboard Using Python/Django, jQuery, Bootstrap and MySql. Dashboard eased the process of inspection and installation of product to end customer and served as a medium for dealers and distributors to connect with cubical team and customers.
- Integrated Geofence to the mobile app using Google Maps, AngularJS and Apache Cordova, which helped in automating home based on user's location.
- Designed and developed Cubical Energy Dashboard using AngularJS and Django. Dashboard helped users to know their electricity bill and ways to conserve energy.

Education

B.E. (Information Technology)	2015	Birla Institute Of Technology, Mesra	69%

Prakhar Mishra

E-mail: prakhar1467.11@bitmesra.ac.in Tel: 7291881192

Life Outside Engineering

- Listening and playing music, self-taught musician.