

# Shivam Rathore

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"Loyalty is a two-way street. If I'm asking for it from you then you're getting it from me."

## EDUCATION

### NIT BHOPAL

B.TECH • COMPUTER SCIENCE

Grad. May 2019 • Bhopal, MP

Gross GPA: 8.23 / 10.0

### JAORA PUBLIC SCHOOL

HIGH SCHOOL

Grad. May 2015 • Jaora, MP

12<sup>th</sup> %: 92.6

## LINKS

Webpage: [shivam010.in/](http://shivam010.in/)

Twitter: @010Shivam

GitHub: @Shivam010

GitLab: @Shivam010

LinkedIn: @shivam010

HackerRank: @Shivam010

## SKILLS

### PROGRAMMING

Languages & Databases:

GoLang • C / C++ • Python • JavaScript

GraphQL • TypeScript • Shell Script

MySQL • PostgreSQL • Redis

Mobile & Web Frameworks

React & Flutter (Working knowledge)

Tools, Technologies & others:

Git • Shell • Protocol Buffers & gRPC

DevTools • Docker • Agile process

IDEs & Editors

JetBrains IDEs: GoLand • DataGrip

SublimeText3 • VS Code • Brackets

Familiar Environments

Mac • Linux • Windows

## SKILLS

### ARCHITECTURE

Micro-services

Using REST, gRPC & GraphQL

Component Based

Using Domain Driven Development

## EXPERIENCES

### APPOINTY SR. SOFTWARE ENGINEER

May 2018 - Present • Bhopal, MP

- Currently, developing a **platform - development framework** for **SAAS** companies, as a multi-layered independent application: a **SAAS platform: SaaSStack**
- And managing the **generic solution** for **data tracking** and **reporting system**, using the background event handlers, in Appointy.
- Developed a complete **background workflows management system** from scratch, responsible for handling *different workflows and cron jobs*. It **manages** all the **notification channels** like *email & sms & calendar*, **reporting** & processing, as well as payment **subscriptions model**, in Appointy.

Software Engineer ( ~ 1.5 Years )

- Developed & own several internal systems comprising the **Core Scheduling Services** in Appointy, like **appointments** and **meetings** scheduling, & **availability** and **shift** management.
- Designing & developed a **PostgreSQL typesafe ORM for GoLang**, named as **Chaku**: described in Projects section.
- Also, developed a generalized solution for the **identification & protection of user's PII**: Personally Identifiable Information
- Became the integral part of the core design & development team on the **Google: REWS Scheduling & Managing** project for Massage and Fitness management.

Software Engineer Intern ( 2 Months )

- Worked on an Enterprise Project Deal for **Google: the REWS Scheduling and Managing** system software since its designing phase.
- Worked on DDD (Domain-driven design) and Micro-Services Architecture
- Technologies: gRPC, GoLang, Rest API, PostgreSQL, Micro-Services
- Helped in designing a Go-framework for building a **spec-compliant GraphQL server in Go** by extending & analyzing an existing framework *samsarahq/thunder*

### HACKERRANK PROBLEM SETTER

Dec 2017 – Dec 2018 • Telecommute

- My job was to **design & create** innovative **real world challenges** & problems for competitive programming contests, with solutions.
- Write different levels of **naive & elegant solutions** to these problems in C, C++, Python; and **formulate** their end to end **test cases generators**.
- During this time, I also contributed to other competitive programming websites like CodeChef and HackerEarth as Problem Setter but only for 1 or 2 problems.

## PROJECTS

### POSTGRESQL TYPE-SAFE ORM MAINTAINER

Dec 2018 – Present • Appointy

- Designed & developed a PostgreSQL type safe ORM for GoLang **using Protocol Buffers as its IDL** - Interface Definition Language,
- The key features include: **Type-Safety** using code generation, **run-time query generation**, **high performance** for a complex IDL structure, and a **simplified database migration** process.
- It helps in **saving a large amount of development time** by eradicating SQL-query writing time with the set of type-safe functions & has **saved ~80%** of developer's work in the micro-service's storage management.
- At Appointy, we call it **Chaku - Indian Knife for Database**. And is the basic building block of all micro-services involving database interactions at Appointy

## COURSEWORK

### UNDERGRADUATE

*Data Structures & Algorithms*

*Functional & Meta Programming*

*Theory of Computation*

*Concurrent & Asynchronous Prog.*

*Compiler Design*

*Operating Systems*

*Computer Networks*

*Unix Tools & Scripting*

*Code Generation & Automation*

## INTERESTS

Marvel comics

Rowling's Wizarding World

Mystery-Thriller-Suspense Novels

Exploring Google Maps

Space Science & Geography

Adventure activities

## PROJECTS

### GOOGLE REWS MANAGEMENT DEVELOPER

May 2018 - June 2019 • Appointy

- Google REWS Management by Appointy *manages Employees' perks and benefits* (free-paid and all) in Google.
- From Massage & Fitness *appointments* to Gyms & Food *Teaching Classes* even the *providers & vendor's management*, everything is covered in it.
- Helped in designing the *micro-services* and the backend logic based on the *domain-driven design*.
- Developed & designed *core-essential services & workflows* like appointments bookings & service availability, overall Reporting, *background tasks & CRON jobs-workflows*, membership & staff managements to name a few.
- Integrated many tools and helped in some of them, like: Google Calendar, G-Suit, Stripe payments, Google docs and sheets.
- Project is currently running *live on all Google locations* throughout the globe.

### BACKGROUND WORKFLOW MANAGER MAINTAINER

March 2019 - Present • Appointy

- It manages all of *Appointy's notification channels*, like *email, SMS, web alerts, calendars, mobile notifications*.
- We also use it to handle some extensive *data reporting, & processing flows*.
- Along with all that, the *payment subscription & membership models* are all also, running in the Background manager.
- It is completely written in *Golang* and uses *gRPC protocol & NATS messaging system for communication, and PostgreSQL for storage*.
- It is durable, scalable and highly available. It provides a very concrete & precise control over the concurrently executing workflows.

### IAM - ROLES & RIGHTS POLICY MODEL DEVELOPER

May 2019 - Present • Appointy

- IAM - Roles & Rights Policy Model is AppointyX's & Appointy's SaaSStack's core service for *managing and evaluating* user's *access and permissions* in the API.
- I maintain & own the *Role creations and evaluation* module in the service and help develop the user's access control model.
- It uses *pattern matching and identification* for calculating and evaluating user's *access to any endpoint* & even to the *individual argument level*.
- Written in *Golang*, it uses a *3 level storage system*, with *in-memory as primary* and *Redis as secondary* cache, and *Postgres* database as the main storage system.

### OSS PROJECTS GITHUB

nitishm/go-rejson • Maintainer

- go-rejson is a GoLang client for *RedisLabs' RedisJSON module* with support for *multiple redis clients: go-redis/redis and redigo/redis*.
- Link to the project: <https://github.com/nitishm/go-rejson>

xqueries/xdb • Contributor

- An *experimental distributed SQL database*, with focus on a readable code-base before performance.
- Link to the project: <https://github.com/xqueries/xdb>

go-freeGeoIP • Maintainer

- A Golang client for *Free IP Geo-Location API service: freegeoip.app/* with inbuilt support of caching to overcome the 15k per hour rate limit.
- Link to the project: <https://github.com/Shivam010/go-freeGeoIP>

nitishm/vegeta-server • Contributor

- A RESTful load-testing API server for *tseart/vegeta, a load testing tool* written in Go, providing users a REST API model for load testing
- Link to the project: <https://github.com/nitishm/vegeta-server>