

Nishanth R

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Experience

Software Engineer

Hyderabad, India

SINGLESTORE 🏠 - GO, KUBERNETES, REACT

December 2023 - Present

- Created and enhanced the billing actions page to streamline workflows, enabling the billing team to efficiently save drafts and monitor the status of sent invoices.
- Increased fault tolerance of posting usage to the new billing service by implementing a resilient job handling mechanism.
- Engineered the generation and migration of over 7k+ invoices using historical usage data collected over several years, transitioning them from PostgreSQL to the new billing service and improving platform performance by 30%.
- Investigated and resolved issues with orphaned Kubernetes pods leaking into CI pipelines, reducing resource drain and improving infrastructure reliability.
- Fixed multiple flaky and outdated tests, restoring reliability to previously skipped tests and improving overall CI pipeline consistency.

Software Engineer

Remote

SHAPE 🏠 - PYTHON, FASTAPI, REACT, GCP, AWS, AZURE

June 2023 - October 2023

- Developed and executed a comprehensive integration strategy, adding Databricks and Airtable integrations to the text-to-SQL agent, resulting in a 20% increase in overall functionality
- Guided clients through the onboarding process onto their preferred AWS, GCP, or Azure platforms, ensuring seamless transition and customer satisfaction
- Took the lead in creating a cloud-hosted version of Shape alongside the existing on-prem solution, increasing accessibility and expanding market reach
- Developed user-friendly scripts to deploy Shape onto GCP and Helm Charts to deploy Shape onto AWS EKS
- Implemented support for alembic for effortless database migrations
- Incorporated functionality enhancements into the Slack bot, including the integration of a CSV button that generates result-oriented CSV files and a SQL button that displays the executed SQL queries, within the Slack workspace

Mentee - Linux Foundation Mentorship Program

Remote

KUBEARMOR 🏠 - GO, C, EBPF, KERNEL DEVELOPMENT

September 2022 - November 2022

- Enabled portability of KubeArmor's BPF system monitor to support multiple kernel versions
- Leveraged BTFGen and libbpf-go to ship BTF Files with KubeArmor Code for kernels not supporting CO:RE
- Generated BTF information at runtime for kernels that have vmlinux but not BTF information with pahole

Platform Engineering Intern

Bangalore, India

MUDREX 🏠 - GO, TERRAFORM, JENKINS, AWS

June 2022 - September 2022

- Implemented command as part of an internal CLI tool that builds and automate seed job creation on Jenkins
- Integrated an automation tool to review changes to pull requests containing Terraform files
- Enabled a highly available Prometheus and Grafana setup by integrating Thanos thereby reducing maintenance costs by 60%

Software Engineering Intern

Bangalore, India (Remote)

HEVO DATA 🏠 - JAVA, APACHE KAFKA, DJANGO

September 2021 - December 2021

- Improvised Stripe integration with the billing platform with enhanced user metrics
- Implemented an automated email notification system and integrated the same with the main infrastructure in Kafka
- Ensured stability by adding automation tests in line with **Agile methodology**

Teaching Assistant, Introduction to Quantum Computation

Remote

MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY

March 2021

- An introductory course funded by the **Ministry of Electronics and IT (MeitY), India**, for the scientists of research institutions like the **Indian Institute of Science (IISc)**, **Center for Development of Advanced Computing (CDAC)** and the **National Informatics Center (NIC)**.
- Served as an administrator for the course discussion thread online
- Evaluated and graded assignments and tests and clarified queries and core concepts to ensure proper understanding of the course material

Software Development Engineering Intern

Remote

UNIACCO 🏠 - DJANGO, REACT, SQL

October 2020 - December 2020

- Worked on the greenfield **Django** backend of the **UniCreds** website 🏠
- Collaborated with cross-functional teams to implement customized user roles for the UniCreds CRM
- Streamlined authentication processes by implementing **JWT tokens** and **Google OAuth**

Education

Indian Institute of Technology, Roorkee

Roorkee, India

BACHELOR OF TECHNOLOGY (B.TECH)

July 2019 - May 2023

- Winner - Best Hardware Hack, HackViolet 2021

Projects

Gasper

SDSLabs

GO, PLATFORM AS A SERVICE (PaaS), REDIS

August 2022 - October 2022

- Gasper is an intelligent Platform as a Service (PaaS) used for deploying and managing applications and databases in any cloud topology
- Working on replacing Redis with BadgerDB by implementing Raft consensus to maintain replicated states across all nodes
- Wrote end to end tests to check and ensure resiliency and robust-ability of the product

Katana

SDSLabs

KUBERNETES, DOCKER, CONTAINER ORCHESTRATION

March 2021 - September 2021

- An attack-defence CTF platform with cloud based deployment infrastructure inspired by container orchestration tools and DEFCON CTF patterns
- Implemented network policies via Egress that serve to secure the cluster from malicious behaviour within the cluster

RusticOS

RUST, OPERATING SYSTEM

- A lightweight, monolithic **x86-64 kernel** written in **Rust** modelled after the linux kernel
- Implemented a few syscalls and scheduler for the processes to have a basic kernel with minimal features

Quizio

REACT, ZUSTAND, MONGODB, EXPRESS, TYPESCRIPT

- Quizio is a platform built to conduct online tests among the students of IITR
- Implemented the **Quiz Creation Flow** while integrating it with the backend

Rootex

C++, LUA, IMGUI

- A 3D multi threaded game engine written in **C++** and **Lua**
- Integrated the **ECS architecture** into the game engine and enhanced the GUI

Skills

PROGRAMMING LANGUAGES | FRAMEWORKS | TECH STACKS

C · eBPF · Go · C++ · Java (Core) · Apache Kafka · Javascript · NodeJS · Typescript · Rust · Docker · Kubernetes · ReactJS · ExpressJS · Laravel · PHP · Python · Qiskit · Django · Linux Terminal · Git/Bash · Github · Cirq · Tensorflow

Extracurricular Activity

SDSLabs

CORE MEMBER

- A student run technical group that encourages and promotes the development of technology and innovation throughout the campus
- Worked on multiple open-source production ready projects
- Conducted workshops and lectures on various concepts within the campus

WatchOut! News Agency

EDITOR

- Official media and journalistic body of IIT Roorkee
- Wrote articles on issues pertaining to the campus and on multiple insightful topics

SDSLabs

December 2020 - March 2021

SDSLabs

January 2022 - May 2022

SDSLabs

April 2020 - May 2020

IIT Roorkee, India

January 2020 - Present

IIT Roorkee, India

October 2019 - Present