

# Nishanth Ramamurthy

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## Education

### Carnegie Mellon University

Pittsburgh, PA

MASTER OF SOFTWARE ENGINEERING - SCALABLE SYSTEMS

Relevant Courses - Intro to Databases, Fantastic Bugs and How to Find Them, Formal Methods, Design Patterns, API Design, Software Architecture

August 2025 - December 2026 (Expected)

### Indian Institute of Technology, Roorkee

Roorkee, India

BACHELOR OF TECHNOLOGY (B.TECH)

July 2019 - May 2023

## Experience

### Software Engineer

Hyderabad, India

SINGLESTORE  - GO, KUBERNETES, REACT

December 2023 - August 2025

- Augmented the Invoicing and Billing system to support Pay-As-You-Go Credit Commitments, enabling flexible, incremental credit purchases and improving adoption among enterprise customers such as Goldman Sachs and 6sense
- Created and enhanced the billing actions page to streamline workflows, enabling the billing team to efficiently monitor the status of 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/CD pipelines, reducing resource drain and improving infrastructure reliability

### 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

### 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 BTFFGen 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

- Automated seed job creation on Jenkins by implementing command as part of an internal CLI tool that builds
- 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

- Improved revenue operations integrating Stripe with billing platform to support 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

### 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 and external vendors to implement customized user roles for the UniCreds CRM
- Streamlined authentication processes by implementing JWT tokens and Google OAuth

## 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
- Worked 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 platform

### 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

# Skills

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PROGRAMMING LANGUAGES | FRAMEWORKS | TECH STACKS

Go · eBPF · 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

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## 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

IIT Roorkee, India

January 2020 - May 2023

## 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

IIT Roorkee, India

October 2019 - May 2023