Nishanth R

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Education

Indian Institute of Technology, Roorkee
Roorkee, India
Undergrad
July 2019 - Expected May 2023
- – Winner - Best Hardware Hack, HackViolet 2021

Experience

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

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**

Software Development Engineering Intern
Remote
UniAcco 🏠 - Django, React, SQL
October 2020 - December 2020
- Worked on the greenfield **Django** backend of the **UniCreds** website 🏠
- Worked on implementing custom user roles for the UniCreds CRM in **MySQL** and **Python**
- Implemented auth flows using **JWT tokens** and **Google OAuth**

Projects

Gasper
SDSLabs
Go, Platform as a Service (PaaS), Redis
August 2022 - Present
- 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 mantain 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 - Present
- 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 🔗
SDSLabs
Rust, Operating System
December 2020 - Present
- 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
SDSLabs
React, Zustand, MongoDB, Express, TypeScript
January 2022 - May 2022
- 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 🔗
SDSLabs
C++, Lua, ImGUI
April 2020 - May 2020
- 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
IIT Roorkee, India
Core Member
January 2020 - Present
- 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
IIT Roorkee, India
Editor
October 2019 - Present
- Official media and journalistic body of IIT Roorkee
- Wrote articles on issues pertaining to the campus and on multiple insightful topics