

Devikrishna Radhakrishnan

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EDUCATION

**UNIVERSITY OF ILLINOIS
URBANA-CHAMPAIGN (UIUC), USA**
MASTER'S, COMPUTER SCIENCE
2021 - 2023
CGPA: 3.84/4

**NATIONAL INSTITUTE OF TECHNOLOGY
CALICUT (NITC), INDIA**
BACHELOR'S, COMPUTER SCIENCE
2014 - 2018
CGPA: 8.46/10

SKILLS

PROGRAMMING LANGUAGES

C++ • C • Java • Python • Bash

CLOUD

Docker • Podman • Kubernetes
OpenShift • OpenStack • AWS

TOOLS

CRIU • Wireshark • Jenkins
Apache JMeter • Postman • Git

OPERATING SYSTEMS

Linux - Ubuntu, CentOS

NETWORKS

TCP/IP • IMS • VoLTE

POSITIONS HELD

TEACHING ASSISTANT (UIUC)
CS173 Discrete Structures (Spr'22- Spr'23)
CS124 Introduction to CS (Fa'21)

TEACHING ASSISTANT (NITC)
CS3092 Operating Systems Lab (Spr'18)

SENIOR EXECUTIVE (NITC)
CS & Engr. Association

AWARDS

1ST PRIZE | 2019
Cloud Applications Hackathon
TOP 100, INDIA | 2015
Invited to Prime Minister's box on
Republic Day for outstanding
nationwide academic achievement
ALL INDIA 11TH RANK | 2014
AISSCE (National Higher Secondary Exam)

COURSEWORK

Cloud Networking
Cloud Computing Applications
Software Engineering
Advanced Operating Systems
High-speed & Programmable Networks
Data Structures & Algorithms

INDUSTRY EXPERIENCE

NOKIA | SOLUTION ENGINEER, [Cloud Network Services - IP Telephony](#)
Kansas, USA July 2023 - Present

- Managed integration of Nokia's [Charging Collection Function \(CCF\)](#) product for a leading U.S. telecom client with 200M+ customers. CCF facilitates telecom service billing and interfaces with other services to gather real-time call data (e.g., call duration, data download volume). Key tasks undertaken:
 - Deployed CCF software in production environments (Nokia's Private Servers) using [CloudBand](#), a cloud orchestration platform for OpenStack VMs.
 - Ensured infrastructure reliability via testing for config bugs and evaluating failover mechanisms (e.g., injecting faults to trigger handover from pilot to standby VMs).
 - Handled service migrations and integrated new sources/ sinks with CCF to collect real-time data/ store runtime error logs. Also authored 4 Method of Procedure (MOP) documents for these procedures.

RED HAT | SOLUTIONS ARCHITECT INTERN, [Telco Tigers team](#)
Raleigh, USA May - August, 2022

- Automated migration of existing VMs ([blogpost](#)) from *OpenStack* to *OpenShift Virtualization*, which is not currently supported in their [Migration Toolkit \(MTV\)](#).
- Updated *OpenShift's* [guide repository](#) with 3 new VM network configurations in *OpenShift Virtualization*. Customers use this repository as an intro tutorial.

ORACLE | APPLICATIONS ENGINEER, [Oracle Service Cloud \(OSvC\)](#)
Bangalore, India 2018 - 2021

- Developed secure and optimized APIs for OSvC's database, contributing over 200 commits to the production codebase.
- Revamped *Orphan Sweep* - an asynchronous mechanism to delete objects in the transactional DB - achieving an **80%** reduction in delete query run-times.
- Developed a microservice to archive infrequently used data in a low-cost storage option, leading to a reduction of customer storage costs by over **50%**.

RESEARCH EXPERIENCE

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN | RESEARCH INTERN
MENTOR: [DR. SIBIN MOHAN, SyNeRCyS Lab](#) 2020 - 2023

- Created a framework using *podman* containers to enable hardware-independent execution of real-time applications in an Internet of Things (IoT) environment.
- Designed a predictable mechanism to perform live migration of containers between edge computing nodes in an IoT system that reduced migration time by **8% to 65%** across scenarios.

PROJECTS

METRIC AWARE LOAD BALANCER FOR MICROSERVICES
MENTOR: [DR. RADHIKA MITTAL, ECE DEPARTMENT \(UIUC\)](#) [GitHub](#)

- Designed a novel load balancing scheme for Envoy, which routes requests based on CPU/ memory usage metrics of the services and nodes running in a cluster.
- The load balancing scheme performs **~30%** better than Round-Robin and **~42%** better than Random, two existing load balancing schemes supported by Envoy.

IMPROVING PACKET DELIVERY PROBABILITY

MENTOR: [DR. VINEETH B S, Department of Avionics](#)

- Enhanced packet delivery probability in a Delay Tolerant Network ([DTN](#)) across heterogeneous sub-networks.
- Studied the impact of different routing protocols on packet loss under varying traffic loads and network sizes to identify optimal combinations of routing protocols to maximize packet delivery, achieving **~90%** delivery probability.