

# RAHUL SUNDARESAN

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## EDUCATION

### M.S. Computer Science

University of North Carolina at Charlotte

2019–2021

Charlotte, North Carolina

### B.Tech Computer Science

SASTRA University

2015–2019

Thanjavur, India

## SKILLS

### Programming

Python

LaTeX

Javascript

CSS

HTML

Node.js

### Tools and Libraries

React

React Native

Mocha

Gatsby

Git

Software Defined Networks (SDN)

REST APIs

IPv6

Mininet

Plotly

pandas

Flask

GitHub Actions

Agile Development

Linux/UNIX

Google Cloud Functions

Firebase

Wireshark

## PROFESSIONAL EXPERIENCE

### Product Consultant

Juniper Networks

September 2021–Current

Hartford, Connecticut

- Scripted a dynamic inventory plugin for Ansible using Paragon Automation Suite as the source of truth
- Implemented an automated provisioning solution using flask (Python) and Kea DHCP server to provision hundreds of Juniper devices based on a single source of truth. This led to a 1500% decrease in required engineering resources and a 400% decrease in provisioning time.

Stack: Python Flask Kea DHCP server

### Full Stack developer

ING

March 2021–December 2021

San Francisco, California

- Implemented features in the company's flagship app using React Native
- Built REST APIs using Google Cloud functions which are consumed by the app
- Architected sequence diagrams for the design of the app using Miro
- Built a location based search engine using a custom built implementation of Geohashes and programmed a search filter using Dice's Coefficient
- Wrote Unit tests using Mocha to verify and validate functionality

Stack: React Native Firebase Google Cloud functions

Node.js

JavaScript

Miro

### Network and System Administrator (Freelance)

Pat & Venky

January 2018–Current

Chennai, India

- Decommissioned an aging Windows based fileshare system and deployed a high availability NAS setup which drastically improved uptime and provided disaster recovery options.
- Configured fileshares with access based controls preventing unauthorized access to proprietary business data.
- Set up separate VLANs, creating a more secure network.
- Set up a cloud hosted Unifi controller on google cloud platform (GCP) to allow for centralized deployment of future sites and reduce CAPEX costs.
- Configured appropriate firewall policies for the VM to prevent unauthorized access.

### Research Assistant

University of Nevada at Las Vegas

June 2020–August 2020

Las Vegas, Nevada

- Collaborated with Dr. Yoohwan Kim and Dr. Ju-Yeon Jo in researching the effectiveness of Multipath TCP in improving TCP throughput.
- Deployed network simulations to measure the throughput under varying latency and loss rate for Singlepath and Multipath TCP networks.
- Processed the output of iperf3's JSON results and graphed the data to visualize trends in throughput.

Stack: Python Mininet Plotly pandas

## CERTIFICATIONS

- JNCIS-SP
- JNCIA-Junos

## PUBLICATIONS

- "BBR Congestion Control Analysis with Multipath TCP (MPTCP) and Asymmetrical Latency Subflow," 2022 IEEE 12th Annual Computing and Communication Workshop and Conference (CCWC), 2022, pp. 1065-1069, doi: 10.1109/CCWC54503.2022.9720867.

## PROJECTS

### Website Portfolio

- Built a personal website using Gatsby with CI/CD on Netlify.
- The PDF resume on the site is written in  $\LaTeX$  and generated with GitHub actions
- The website automatically integrates the latest version of the resume whenever a commit is made to the  $\LaTeX$  repository using GitHub Actions.

### Teammaking

- Developed a full stack application that generates teams based on a survey.
- Collaborated with other developers following an agile development methodology and built using React, Node and MySQL.

### Agency spotter scraper

- Designed a pipeline to scrape the agency spotter website using Python's BeautifulSoup library and a bash script.