

RAHUL SUNDARESAN

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🔗 <https://rsun.dev>

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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

Jira

Junos

Juniper Apstra

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.
- Used Python to automate provisioning of configuration to hundreds of switches in a DC based on Juniper Apstra without any Downtime

• Stack: Python Flask Kea DHCP server Juniper Apstra

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
- Participated in an agile development environment and used Jira to keep track of user stories and tickets

• Stack: React Native Firebase Google Cloud functions
Node.js JavaScript Miro Jira

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.

Agency spotter scraper

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