RAHUL SUNDARESAN

@ rahul@rsun.dev (980)-255-0390 https://rsun.dev https://github.com/rahul-sundaresan

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 New Haven, Connecticut
- Scripted a dynamic inventory plugin for Ansible using Paragon Automation Suite as the source of truth
- Implemented a Zero touch provisioning system 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.
- Validated the design submitted by the design team for a 911 network which carried mission critical traffic.
- Attended regular security briefings to decide if a security issue applied to the current project
- Designed Method of Procedure documents for various phases of the project
- Used Python to automate provisioning of configuration for a datacenter based on Juniper Apstra with minimal downtime
- Participated in on-call rotations to assist with a datacenter migration with minimal disruption to production traffic.
- Used Apstra's telemetry tools to investigate and troubleshoot anomalies in an L3 fabric network
- 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.
- Deployed a Unifi network to ensure greater network reliability and create network segmentation policies.

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.