

RAHUL SUNDARESAN

I am a graduate student currently pursuing a MS degree in Computer Science at UNC Charlotte. My interests lie in computer networks and web development with React. I am looking for remote software development opportunities for Fall 2020

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EDUCATION

M.S. Computer Science GPA: 3.6/4.0

University of North Carolina at Charlotte

📅 2019–Current

📍 Charlotte, North Carolina

B.Tech Computer Science GPA: 6.9/10.0

SASTRA University

📅 2015–2019

📍 Thanjavur, India

PROFESSIONAL EXPERIENCE

Research Assistant

University of Nevada at Las Vegas

📅 June 2020–Current

📍 Las Vegas, Nevada

- Collaborated with Dr. Yoohwan Kim and Dr. Ju-Yeon Jo in researching the effectiveness of Multipath TCP in improving bandwidth
- Deployed network simulations to measure the throughput under varying latency and loss rate for single-path 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

Software Development Intern

Capgemini Technology Services (Storage and Infrastructure team)

📅 November 2017–December 2017

📍 Bangalore, India

- Augmented an in-house software written with PHP with the ability to create and manage Rundeck jobs using the Rundeck API
- Implemented single sign-on between rundeck and the inhouse software which allowed for a faster and more secure way of signing into Rundeck

• Stack: PHP Rundeck

Software Development Intern

Perpetuuiti Technosoft

📅 November 2016–December 2016

📍 Chennai, India

- Built an application with a GUI using the *Eldos Callback Filter* to track changes to files and rollback changes occurring in the Windows filesystem using C++ which served as a backup solution as a part of Perpetuuiti's portfolio

• Stack: Windows API C++

Network and Sysadmin Intern

Pat & Venky

📅 January 2016–Current

📍 Chennai, India

- Set up a NAS along with a backup system for collaboration
- Deployed IPv6 for end clients along with proper firewalling
- Upgraded the network to use Unifi hardware and set up appropriate VLANs for management, different departments and the CCTV network
- Setup a cloud hosted Unifi controller on google cloud platform (GCP) and set up appropriate firewall policies for the VM

PROJECTS

Portfolio - Built a personal website using Gatsby with continuous deployment on Netlify. The PDF version of my resume on the site is automatically generated using \LaTeX with GitHub actions. The website automatically pulls the latest resume from the latex resume repository whenever a commit is made to the \LaTeX resume repository.

Teammaking - Developed a full stack application that generates teams based on a survey taken by the students. Final project for my Software design course. Built using React, Node and using MySQL as the database

Network ranger - Refactored and code reviewed a Discord bot that manages user roles and permissions in a discord server. I also optimized a docker workflow to ship the bot as a docker image. Currently working on a website for the server that uses the discord OAuth2 API for login. The bot is built using python and mongoDB

Network-gui - Created a React app that visualizes a network topology by querying a SDN switch and using react d3 to plot the nodes

TCP over UDP - Implemented the TCP go-back-N and selective repeat protocols over UDP. Written in python

Tiny HTTP system - Implemented a very basic HTTP client and server which supports PUT and POST requests (with file transfer too!)

Agency spotter scraper - Wrote a Python and bash script to scrape the agency spotter website, and process the results as a csv

SKILLS

Programming

LaTeX

Python 3

Java (Android Development)

React

Gatsby

\LaTeX

Tools and technologies

Git

REST APIs

IPv6

Software Defined Networks (SDN)

Mininet

Netlify

GitHub Actions