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
L&T (Smart World & Communication)

📅 May 2018–June 2018   📍 Chennai, India

- Programmed a tool using Python and *OpenCV* library to classify if a supplied video was blurry to detect tampering of cameras.
- Summarized technical tenders about IMS based solutions into concise reports
- Stack: Python | OpenCV

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

📅 November2016–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 - Personal website built using Gatsby with continuous deployment on Netlify

Teammaking - A software 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 - Discord bot built using python and mongoDB that manages user roles and permissions. My contributions involve refactoring the code and code review. I also set up 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

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

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

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

Agency spotter scraper - Python and bash shell script to scrape the agency spotter website

SKILLS

Programming

LaTeX | Python 3 | Java (Android Development) | React | Gatsby | LaTeX

Tools and technologies

Git | REST APIs | IPv6 | Software Defined Networks (SDN) | Mininet | Netlify