

Software Engineering Intern Software Engineering Intern Software Engineering Intern - Versa Networks San Jose, CA Work Experience Software Engineering Intern Versa Networks - San Jose, CA January 2018 to Present Automated test cases for validating BGP, IKE and IPsec using python for several conditions in multi-tenant SD-WAN architecture. Custom Network Protocol October 2017 to October 2017 Designed a custom protocol independent of OSI layers by removing unused header fields to reduce excess overhead. Achieved a file transfer speed of 58.3Mbps using custom router and custom protocol over a link speed of 100Mbps with 20% loss. Custom IP Router September 2017 to September 2017 Built a user space custom IP router that created ARP requests, ARP response, supported packet forwarding and dynamic routing. Generated response for various ICMP messages and handled traceroute. Achieved a throughput of 957Mbps on 1Gbps duplex link. Fast and Reliable Data September 2017 to September 2017 Developed a custom protocol to reliably transfer large files over a high latency, high loss link of 200ms RTT, 20% loss. Reliability is achieved by selective retransmission along with high throughput of 74.09Mbps gained by multithreaded design. Implementation of non-preemptive monolithic kernel-WEENIX Language: C February 2017-April 2017 Implemented functions in kernel space for processes and thread creation and mutex thread synchronization. Developed virtual file system with robust operational API for directory lookup, file operations using polymorphic function calls. Executed Virtual Memory system involving user address space, page table, copy-on-write and fork. Software Test Automation Intern Spirent Communications - Los Angeles, CA May 2017 to August 2017 Created and automated test suites for Spirent Test Center (STC) to test behavior of STC for 802.11, fast transition roaming, band steering. Created and configured the Jenkins jobs to run automated test cases in regression. Worked with Perforce VCS. Developed comprehensive test scripts for MIMO throughput benchmarking and performed daily regression investigation. Completed all assigned tasks well before deadline with 100% optimum solution and thus majorly contributing to team iteration points for a version release cycle. Network Administrator Assistant USC School of Pharmacy - Los Angeles, CA March 2017 to May 2017 Designed and simulated business level network layouts and data flow diagrams covering about 98% of college campus network.

Maintained networks and firewalls of multiple subnets and configured Linux servers at USC health science campus. POX controller to communicate switches Mininet and Open March 2017 to March 2017 flow protocol Language: Python March 2017 Created L3 switch network topology using Mininet emulator and Openflow protocol, used POX controller to communicate switches. Implemented routing functionalities such as parsing received packets, creating reply packets and ARP cache creation. Token Bucket Emulation January 2017 to February 2017 Implemented token bucket emulation to handle four threads and used mutex for synchronization among threads. Performed signal handling for proper termination of program interrupt signal, SIGINT. Cloud Performance October 2016 to November 2016 Evaluated performance of Amazon cloud using m3.xlarge AWS instance type and small to huge sized datasets. Analyzed throughput, efficiency, CPU utilization for scale-up, scale-out scenarios on AWS using Elastic Map Reduce(EMR). Network Engineer Intern BSNL - IN September 2013 to November 2014 Monitored SONET, SDH and located faults in a working OFC using OTDR and done splicing to 97% of accuracy with 0.29dB loss. Education Master of Science in Electrical Engineering University of Southern California - Los Angeles, CA May 2018 Bachelor of Technology in Electronics and Communication Jodhpur National University - Jodhpur, Rajasthan May 2015 Skills CISCO (Less than 1 year), DHCP (Less than 1 year), DNS (Less than 1 year), FTP (Less than 1 year), HTTP (Less than 1 year) Links <https://www.linkedin.com/in/mayankmhatre> Additional Information TECHNICAL SKILLS Operating Systems: Windows, Linux, Mac, Unix Cloud Technologies: AWS, Docker, Intel HiBench, Openstack, NSX Programming Languages: C, Python, TCL Protocols: TCP/IP, UDP, DNS, ARP, RIP, OSPF, DHCP, HTTP, CIDR, Tools: Spirent Test Center (STC), Wireshark, Cisco Packet NAT, SMTP, Telnet, FTP, ICMP Tracer, NS2, Opnet, MS Visio, gdb, Jenkins, Perforce, JIRA

Name: Samuel Scott

Email: amber85@example.org

Phone: 478.223.6716