# ZALAK BHATT

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## EXPERIENCE

**Network Engineer - CenturyLink Inc, Monroe, Louisiana** **May 2017 - Present**

- Managing and performing proactive maintenances on network elements for voice, video and data networks
- Responsible for providing **L2, L3 support** to the nationwide deployment of **Cisco, Juniper, ADTRAN, Calix, Citrix and Fujitsu** switches and routers.
- Configuration of **BGP, OSPF, VLAN, IPSec, VPN** and building VPLS connections in the **nationwide MPLS network**.
- Troubleshooting issues in DSLAM, VLAN, MPLS, BGP, **TCP/IP, VoIP, IPTV**, and HSI services using Networking Tools like Wireshark, Traceroute, ping, TCPdump
- Maintenance of the access network including reconfiguring DSLAMS from ATM to Ethernet configurations
- Working with the Planning, Engineering and **NOC** to resolve escalated customer issues
- Developing plans to augment capacity relief as needed.

**Network Research Intern - Scienix Electronics, Gujarat, India** **January - June 2013**

- Created and maintained comprehensive documentation for all implemented networks.
- Worked with other Network Engineers to create a network and intranet capable of handling all company needs.
- Troubleshooted issues with the network in order to make it run more efficiently and to avoid future problems.

## EDUCATION

**Master of Science in Electrical Engineering (Networking)**

**San Jose State University** **December 2016**

Network Programming and Applications, Network Security, Cryptography, SSL, Broadband Communication, Convergent Voice and Data Networks (VoIP), Internetworking, Web Page Development, Pen Testing, Wireless Communication

**Bachelors in Electronics and Communication Engineering**

**Gujarat Technological University** **June 2013**

Computer Networks, Radar and Wireless Communication, Signals and Systems, Mobile Communication Systems, Optical Fiber Communication, Digital Communication, Basic and Advanced Electronics, VLSI, Nanotechnology

**Diploma in Electronics and Communication Engineering**

**B. S. Patel Polytechnic** **June 2010**

Basic Electronics, Microprocessor 8085, Microcontroller 8051, Communication Principles, Circuit Analysis

## TECHNICAL SKILLS:

**Languages:** C/C++, Python

**Tools:** Cisco Packet Tracer 6.0, Wireshark, GNS3, Stealthwatch, ISE, Pycharm, Eclipse, NS2, NS3, CMS, NOKIA SAM, TCPdump

- Experience with CALIX, CITRIX, CISCO, JUNIPER, CIENA, ADTRAN, ACTELIS devices

**Fundamentals:** TCP/IP, UDP, RIP, OSPF, EIGRP, BGP, MPLS, Ethernet, DHCP, DNS, ARP, IPsec, NAT, VPN, FTP, PPP, SDN, ICMP, SSH, SSL HTTP/HTTPs, LTE, 802.11, Firewalls, Loadbalancers

**OS :** Windows, Linux, Kali Linux, Mac iOS

## ACADEMIC PROJECTS:

**Secure Client-Server File Transfer- (Python, Linux CLI)**

- Designed and implemented secure key exchange and encrypted file transfer between client and server.
- Successfully implemented EKE protocol, DH (Encrypted Key Exchange), AES 128 encryption (ECB, CBC modes), SHA1 hash algorithm for secure key exchange and to check file integrity in python.

**Audio Video & Text communication Application Developed using WebRTC**

- Developed an application for the real time audio and video peer to peer communication between two browsers by using WebRTC.
- Used different APIs like getUserMedia to get audio and video from the device and then RTCPeerConection, STUN/TURN server to get connection between two peers. By using RTCDataChannel shared the data/media between two peers.

**Multi-Client Chat Server**

- Made a Chat server which could handle multiple clients at same time using socket programming in C language.
- Every time a new client wants to join a group or wants to send personal message to the other client, a new thread got created. Implemented authentication, different statuses and multiple groups as well.

**Simulation of Multiprotocol Label Switching Networks Using NS-3 Tool – (NS-3, Linux CLI, C++)**

- Implemented a Multiprotocol Label Switching Network topology using NS-3 tool for label swapping in MPLS network.
- Rearranged topology and successfully tested ILM, NHLFE, FTN and FEC.