

# Simon Shrestha

shrestha01123@gmail.com | 9379609551 | <https://Simant.xyz> | [github.com/Simant0](https://github.com/Simant0)

## EDUCATION

---

**Bachelor of Science**, Computer Science  
Truman State University

Jan 2017 - May 2021

## PROJECTS

---

### Home lab network

- Designed a small network for homelab in a virtual environment.
- Hypervisor( proxmox) was used to virtualize different machines with different OS.
- the network had internet access via a router running pfsense.
- Vulnuerable machines such as metasploitable and dvwa were used as victim machines.
- Kali linux was used as attacking machine to practice penetration testing.

link: <https://simant.xyz/static/media/Homelab.2e7ed5df.pdf>

### Full-stack web app development

Built a full stack web app using MERN stack implementing RESTful api:

- React framework was used for building and designing fclient-side using jsx and css.
- Express framework in nodejs for developing server-side and provides api to the frontend.
- MongoDB atlas as a database to store information.

link: <https://99fud.com>

### High-availability cluster prototype

Designed and implemented high availability cluster in server-client and peer-to-peer network to recover failed nodes.

- Java programming language was used to develop the project.
- heartbeat protocol was implemented to detect failed nodes.
- In case of server failure, appropriate node will be assigned as a new server.

link:<https://github.com/Simant0/HACprototype>

### Neighbour Joining ( Phylogenetic Tree generator)

Developed a program to generate phylogenetic tree.

- python language was used to develop the program.
- implemented dynamic programming for string alignment in various dna sequence operations.
- finds the genetic difference between the provided dna sequences with configurable scoring parameters.
- The phylogenetic tree is calculated using Neighbour-Joining algorithm.

link: <https://github.com/Simant0/NeighbourJoining>

## SKILLS

---

**Web development:**html, css, javascript( React, nodejs, Express), Postman

**Database:**mongodb, mysql

**Programming and development:** C, C++, C#, Java, Python, Assembly( MIPS), clojure, git

**OS and Virtualization:** linux, windows, android, proxmox, virtualbox, docker

**Networking:** wireshark, nmap, burpsuite, pfsense, IDS/IPS, metasploit, VLAN

**Documentation:** latex, word, powerpoint

Relevant Coursework

---

- Data Structures and Algorithms
- Object-Oriented Programming
- Systems Programming
- Computer Database
- Computer Security Fundamentals
- Bioinformatics
- Software Engineering
- Programming Languages
- Cyberethics