



# Zain Ali Khokhar

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## Education

<b>O Levels</b>	2015 – 2018
Lahore Grammar School Johar Town, Lahore	
<b>A Levels</b>	2015 – 2018
Lahore Grammar School Johar Town, Lahore	
<b>BS Computer Science</b>	2020-Current
Lahore University of Management Sciences, Lahore	

## Skills

- Skilled in C++, Python, Visual Basic, MATLAB, HTML5 and CSS3
- Familiar with JavaScript

## Awards

<b>Gold Medal in Pakistan National Informatics Olympiad</b>	2019
<b>Silver Medal in Pakistan National Linguistics Olympiad</b>	2019
<b>LUMS Dean's Honour List</b>	2020-2021
<b>LUMS Dean's Honour List</b>	2021-2022

## Courses

### Object-Oriented Programming – LUMS

Fundamentals of Computer Systems – LUMS

Data Structures – LUMS

Introduction to Artificial Intelligence – LUMS

Network-Centric Computing – LUMS

Fundamentals of Deep Learning - NVIDIA DLI

## Projects

### Responsive Resume Website

- Website Link: <https://zainalikhokhar.github.io/index.html>
- Developed a Responsive resume website using HTML and CSS

### ToDo List website for multiple users

- Website Link: <https://zainalikhokhar.github.io/ToDoList.github.io/>
- Developed a ToDo List website, that maintains data for multiple users in localStorage, using HTML, CSS, and JavaScript
- Sign Up/Log in forms, with username and password verification, to register users and login existing users
- Maintains the current user's state in sessionStorage
- Users can add and delete tasks from localStorage through forms and buttons on the ToDo list display webpage

### Neural Network

- Developed a multiple hidden layer neural network using python and numpy
- Trained the NN model on the Fashion\_MNIST dataset, and my own dataset to predict classes for clothing items

### Client Server Chat Application

- Implemented a chat application in Python using socket programming and threading.
- The application allows the clients to join and disconnect from the server and exchange messages and files between active users through the server
- Ensured reliable transport of packets over UDP through sliding window mechanism, cumulative ack, timer, and checksum

### Intra-Domain Routing

- Implemented Link-State Routing to forward packets along the shortest path through the network by considering unexpected link or router failures, changing link costs, and new connections between routers and clients

### Peer-Peer File Sharing System

- Built a peer-peer file sharing system using a Distributed Hash Table based key-value storage system
- The system allows users to join or leave the system and transfer files to the appropriate node upon joining/leaving of another node
- Allows the users to get/put files on the nodes in the distributed system
- The system is made resilient to node failures by replicating files of each node on its successor node and updating failed node's successor and predecessor after detection of the failed node through ping

### Tic-Tac-Toe

- GitHub Link: <https://github.com/zainalikhokhar/TicTacToe>
- Developed a Player vs Player and Computer vs Player Tic-Tac-Toe game using C++

### Hand Gesture Controlled Robotic Car

- Built a hand gesture controlled robotic car using Arduino

## Work Experiences

### House Captain – LGS JT

2019-2020

- Arranged inter school sports competition
- Assisted and oversaw house meetings & activities

### Internship – Akhuwat Head Office

Aug 2019

- Worked on a project to raise donation for tree plantation

### Internship – World Wide Fund for Nature

Jun 2019

- Carried out a campaign on banning the use of plastic bags in schools & markets
- Signed MOUs with various shops for stopping the use of traditional plastic bags