Abdul Rafay Ahmed Khan

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Education

BACHELOR OF COMPUTER SCIENCES (CS) | 2020 - 2024 | LAHORE UNIVERSITY OF MANAGEMENT SCIENCES (LUMS) | CGPA: 3.69

Key Courses: Introduction to Blockchain, Intro to Artificial Intelligence, Data Structures, Network-Centric Computing, Fundamentals of Computer Systems, Discrete Mathematics, Introduction to Programming, Calculus II, Linear Algebra.

A-LEVELS | 2018-2020 | NIXOR COLLEGE, KARACHI| GRADES: A*s & As

Courses: Mechanics, Mathematics, Physics, Chemistry, Statistics, English, Biology, Urdu.

O-LEVELS | 2015-2018 | CITY SCHOOL PAF CHAPTER, KARACHI| GRADES: A*s & As

Research & Projects

1. **_Implementation of File and Message Transfer using TCP/UDP:_** Developed a terminal app in Python using both a reliable and unreliable transport protocol together with the transport logic.
2. **_Implementation of Link-State Routing:_** Designed my version of Link-State Routing in Python using Dijkstra's Algorithm.
3. **_Implementation of a Peer-to-Peer File sharing system:_** Built a peer-peer file sharing system that uses Distributed Hash Table, leverages consistent hashing, and is resilient to node failures in Python.
4. **_Blockchain Mining and Chain Validation Algorithm:_** Designed my version of blockchain mining and chain validation with cross-validation from nodes in the local blockchain in Python.
5. **E-Periodic Table:** Designed my own version of an E-Periodic Table in C++.
6. **_Ethereum Smart Contract deployment using Solidity:_** Deployed a simple Blockchain-based Banking System program using a Solidity Smart Contract and a Blockchain-based Auction program using a Solidity Smart Contract using Ropsten Test Network.
7. **_Implementation of an Artificial Neural Network from scratch:_** Made my version of an ANN with 1 hidden layer and then with N number of hidden layers in Python using the MNIST and Fashion MNIST dataset from Keras and tested the Neural Network on a dataset created by me and it gave above average accuracy on my dataset.
8. **_Implementation of Linear Regression and Multi-variable Linear Regression from scratch in Python using NumPy._**
9. **_Implementation of the ID3 Algorithm in Python on provided datasets._**
10. **_Made a program for a Simple Reflex Agent and Model-Based Agent to solve a simplified variant of the Wumpus World Problem in Python._**

Skills

· Python
· C++
· Blockchain
· Solidity
· Basic Machine Learning

Honors & Awards

· Syed Babar Ali School of Science and Engineering Dean's Honor List 2021
· Nixor College High Achiever Award 2020
· Received 25% sports scholarship in Nixor College 2018-2020
· Captain of Nixor College's Basketball Team 2019-2020
· Captain of The City School PAF Chapter's Basketball Team 2017-2018

Extracurriculars'

· Key member of LUMS Basketball Team 2022
· Nixor Basketball Team 2018-2020
· The City School PAF Chapter Basketball Team 2015-2018

Professional Experience

Animal Welfare Society - LUMS | Assistant Director - Human Resources and Logistics 2021-Present

Leading a team of 8 people; Successfully secured a sponsor worth more than 100,000 PKR for the society; Successfully planned and managed the flagship event of the society, Pets Day, in which more than 200 LUMS students showed up.

LUMS Community Service Society | Volunteer 2020-2021

Meri Bhi Aik Khwaish Hai | Financial Analyst 2018-2020

Managed all the finances of this NGO; Decided budgets for all the events; Successfully scored various sponsorships.