

KHALID SHAREEF

[GitHub](#) ◇ [LinkedIn](#) ◇ [Email](#) ◇ [Contact](#)

EDUCATION

2018 - 2022	Bachelor's Degree in Computer Science at IIT Hyderabad	8.13/10.0
2016 - 2018	Telangana State Board of Intermediate Education	94.8%
2016	Telangana Board of Secondary Education	10.0

COURSEWORK

Relevant Courses	Data Structures, Algorithms, Computer Networks, Network Security, Operating Systems, Compilers, Database Management Systems, Probability and Statistics
-------------------------	---

SKILLS & INTERESTS

Programming languages	Java, JavaScript , Python, HTML, CSS, React
Tools	Git, Linux, GDB, Docker, Gradle, Postman
Frameworks	Express, Mockito, Jackson, JUnit
Databases	MySQL, PostgreSQL, MongoDB
Other	Network Security and extremely interested in Database Systems

EXPERIENCE

MathWorks, Hyderabad, India	Jul 2022 - Feb 2023
Associate in Engineering Development Group	<i>React, Express, JavaScript, C++</i>

- Developed Cut, Copy and Paste functionality as a plugin for tree widget UI element to move nodes dynamically via ContextMenu and Keyboard Shortcuts. This functionality got integrated into Simulink's Diagnostic Viewer enabling users to debug faster.
- Wrote Unit tests in C++ using Google Test framework for a backend tool which reads PCB data from CSV files into corresponding classes.
- Worked on building a Website which acts as home for multiple internal applications. Developed multiple react components for different UI elements and worked on building APIs for different UIs.

PROJECTS

Jukebox Link	<i>Java, OOD, JUnit, Mockito, SOLID</i>
-------------------------------------	---

- Built backend for hackerrank like Coding platform with emphasis on good design principles.
- Implemented business logic for simulating a contest.
- Modelled a Jukebox application from scratch with a clean architecture.

Stock portfolio Analyzer Link	<i>Java, Jackson, JUnit, Mockito, REST</i>
--	--

- Built a Stock Analyzer tool for portfolio managers to help them manage their client trades.
- Used Jackson library to serialize and deserialize the JSON files containing historical trade data.
- Developed REST APIs to call third party services like Tiingo and Alpha Vantage to retrieve stock quotes given a historical closing date.

Social Network Link	<i>Express, TypeScript, Firebase</i>
--	--------------------------------------

- Built a Social Networking application which allows users to follow and message other users.
- Users can post content(text and images) which gets showed on their followers feed.
- Used Firebase for storing content posted by Users.

Firewall	<i>Python</i>
-----------------	---------------

- Built a Network Firewall with an interactive CLI for User interaction.
- Provides packet filtering based on combination of multiple Layer 2, 3 and 4 protocols(IPv4, IPv6, ICMP, TCP, UDP, ARP)
- Added Support for dynamically adding/updating firewall rules using a custom application layer protocol

IMDB database Simulation

PostgreSQL, Python

- Went through end-to-end process of designing a database schema from ER modelling to building different relations.
- Built a movie database similar to IMDB using PostgreSQL in pgAdmin.
- Used third party APIs for scraping the unavailable data for populating the relations.

Multithreaded Musical Chairs

C++

- Simulated Musical Chairs game using multithreading in C++.
- Has multiple threads representing the players and a separate thread representing Referee.
- Referee thread controls a timer which stops at random intervals of time for every round of the game.
- Used mutex locks, semaphores and conditional variables for synchronizing the player threads with the timer.

ACHIEVEMENTS

- Ranked 115 in ImaginaryCTF 2021
- Ranked 256 in JEE Advanced