



Firoz Mohammad

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Profiles : [Linkedin](#), [Codechef](#), [Hackerearth](#), [Github](#).

About : Software engineer with 1+ year of experience in software development and Data Science. Eager to learn, build innovative and cutting-edge software solutions.

SKILLS

- C/C++, Python, Java
- MySQL, SQLAlchemy
MongoDB
- Kafka(Advanced), RabbitMQ
- Docker
- FastAPI, Django
- Git, CI/CD(Jenkins,
Bitbucket, GitLab)
- GCP(Compute, kubernetes,
Container Registry),
AWS(Beginner)
- Parallel Programming
OpenMP
MPI
CUDA
- Algorithms and Data
Structures
- Machine Learning
- Deep Learning
- Data Visualisation

WORK EXPERIENCE

Software Engineer

@ Quantrium

July 2022 - present

- Created db schema, RESTful APIs with unit tests that served data to VueJS front-end based apps dynamically using FastAPI and mongoDB.
- Cryptography module for encrypting/decrypting the dict/json document in database with different crypto algorithm, decentralized secret based key generation at runtime. Analyzed different key protection techniques.
- Developed email service API with backend microservices for sending scheduled mail. Built different architecture for sending scheduled mail and analyzed their performance, reliability etc. Different kafka mongodb connectors and created source and sink to capture and send data changes from database to kafka and vice versa.
- Reviewed the existing code base of authentication and authorization APIs and resolved a few bugs and made it more secure.
- Worked on containerizing applications, deploying to gcp vm instances and kubernetes.
- Worked on setting up base backend codebase across projects with docker, PyPi, sphinx auto documentation and CI/CD pipelines implemented using different automation servers like jenkins, bitbucket and GitLab.
- Developed and deployed a module for asynchronous logging using kafka and kafka-gcs connector that stores the applications log to gcp bucket in real time with SASL protocol.

EDUCATION

**Indian Institute of Information
Technology Kancheepuram,
Chennai**

B.Tech & M.Tech

Computer Engineering

CGPA - 8.89

Aug 2017- May 2022

Chennai, India

CERTIFICATIONS

- The Joy of Computing using Python - NPTEL
- Programming in Java - NPTEL
- Social Network - NPTEL
- Cloud Computing - NPTEL
- GitLab CI: Pipelines, CI/CD and DevOps for Beginner - Udemy
- Machine Learning - Udemy

SOFT SKILLS

- Adaptability
- Quick Learner
- Team Work

Software Engineer Intern

@ Quantrium

January 2022 - June 2022

- Created backend architecture of ML projects and implemented it using FastaAPI and kafka queues, producer/consumer for speeding the different stages of ML tasks. Dividing the ML modules, containerizing and running it as microservices.
- Worked on building email service architecture and developing it as microservices for sending transactional and bulk email (in real time) asynchronously with high throughput using kafka, docker, mongoDB, FastAPI, jinja2 template, mail server etc.

Data Science/ML Intern

@ Blackcoffer

June 2021 - November 2021

- Built data pipeline in python from fieldpulse to GCP MySQL and deploying to gcp.
- Analyzing and visualizing dataset of 3 million used car details and creating a model for predicting price of used cars based on their parameter details.
- Worked on building RESTful APIs in Django that interface the ML model which outputs the predicted price of cars.

PROJECTS

• IP Messenger

A cross platform chat application where multiple users can send and receive messages and can share any type of files of any size based on TCP/IP which does not require a server machine. We have implemented features such as User Authentication, Files System for storing messages and images sent using the app, listing all available connections over the same WiFi, etc.

• Object Detection & Tracking Using Template Matching

An application to detect and track objects using live webcam feed. Implemented in C++, OpenMp, MPI, CUDA.

• Indo Guide

An indoor navigation system to build indoor maps and then use it for indoor navigation. It includes text to speech voice assist guides to help travelers for tourist places, airports etc. We have

developed this using Java, Python and Mobile sensor data extraction and manipulation.

- **A Desktop App for Electricity Distribution System**

A Desktop application for managing Electricity Distribution in India. It includes functionality of login for employees/customers , apply/track for new electricity connection , sms/email electricity billing info etc.

COURSES

- Database(Theory + hands-on MySQL)
- Advanced DS & Algorithms(Theory + Hands-on in C/C++)
- Pattern Recognition(Theory + Hands-on in Python)
- Computer Graphics(Theory + Hands-on OpenGL)
- High Performance Computing(Theory + Parallel Programming in OpenMP, MPI, CUDA)
- Device Driver (Theory + Hands-on in C)
- Big Data(Theory + Hands-on PySpark)
- Digital Image Processing(Theory + Hands-on OpenCV with Python)
- Deep Learning(Theory + Hands-on Keras)
- Data Analytics(Theory + Hands-on in Python, Tableau)
- Discrete Mathematics, Linear Algebra, Probability
- Operating System, Computer Architecture, Computer Networks, DBMS, Embedded Systems, Human Computer Interaction
- Sociology in Design, System Thinking of Design, Product Development Prototype (PDP)

ACHIEVEMENTS

- **Google Hashcode 2021** - Rank 298 (India) & Rank 1676 (Global)
- **Reply Code Challenge 2021** - Global Rank 302
- **Sangam 2019 IITMAA** : Rank 47
- **E-Yantra Robotic Competition 2018** (IIT Bombay): With the help of drones we did mimic the pollination of bees. Learned and applied: [Image Processing ,python, PIDTuning]