Ishan Tyagi

Github | Portfolio | Linkedin
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EDUCATION

IIIT HYDERABAD
M.Tech in Computer Science
Post Grad 2018-20 |Hyderabad,India

KNIT,SULTANPUR
B.Tech in Information Technology
Grad 2013-17|Sultanpur,India

SKILLS
- C/C++ •Golang •Python
- Docker •Kubernetes •Etcd
- Prometheus •Grafana
- AWS(EC2,S3) •Azure •Helm
- NoSQL •SQL •Bash •Git

COURSEWORK
- DataStructures and Algorithms
- Operating System
- Computer Networks
- Distributed system
- Database system
- Statistical method in AI

MOOCS
- Machine learning by Stanford University offered through Coursera
- Deep learning by deeplearning.ai offered through Coursera

ACHIEVEMENTS
- **SAP 2021 High Impact Award:** For extraordinary contribution.
- **AIR-840** among 107,893 candidates with **99.22** percentile in GATE CS 2018
- Scored **95/100** in both Physics and Chemistry in class 12th
- Secured **2nd** Rank in District Chess championship

WORK EXPERIENCE

SAP LABS,INDIA Developer
April'22-Present
- Working as Core Developer on OpenSource Project **Gardener:Kubernetes at Scale**
- Contributor and Maintainer of **etcd-backup-restore** and **etcd-druid**(aka etcd-operator): control Plane component of Project Gardener.
- Primary focus is to design, implementing the Multi-node etcd-backup-restore and move to multi-node from single node etcd-backup-restore.
- Leads the cross team communication and give inputs/design/implements their feature requirements.
- Taking care of releases the new version of etcd-backup-restore.
- Performed the root cause analysis for any etcd issues and fixed them on priority.
- **Notable Contributions:** To dynamically load IaaS credentials such that there will be no pod restart required. and Added the new prometheus metrics for multi-node etcd..

Associate Developer
July'20-March'22
- Designing, implementing and owning critical components of Multi-node etcd-backup-restore.
Notable Contributions:
  - Developed LeaderElection for Multi-node etcd-backup-restore.
  - Prepared the etcd-backup-restore to use Gomock framework for unit testing.
  - Developed the feature to compress the snapshots before uploading to object store and decompress the snapshot while restoration.
- Also worked as kubernetes administrator to resolve end-user issues and troubleshoot the cluster.

PROJECTS

DISTRIBUTED KEY-VALUE STORE |Java

- Developed a distributed system to store key-value with fault tolerance.
- Clients can request GET, PUT or DELETE key.Involved components like master-slave architecture and consistent hashing.
- Multiple clients communicate with a single master server in a JSON messaging format.

RAFT PROTOCOL |Go
- Implemented a replicated log system using RAFT consensus algorithm.
- Involved components like Leader Election and log replication, reliable persistence of states to manage failure.

MINIBIT TORRENT |C++ ,Pthread

- Developed a Peer to Peer multimedia file sharing network.
- Tracker with fault tolerance is implemented which helps in getting a file from multiple available seeders.

THREADPOOL LIBRARY |C++
- Implemented a Generic ThreadPool library, it helps in spawning and destruction of threads.
- Implemented a Multi-Threaded web server using threadPool library.