

# Ishan Tyagi

Github | Portfolio | LinkedIn  
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## EDUCATION

### IIIT HYDERABAD

M.TECH IN COMPUTER SCIENCE

Post Grad 2018-20 | Hyderabad, India  
CGPA: 7.71/10

### KNIT, SULTANPUR

B.TECH IN INFORMATION  
TECHNOLOGY

Grad 2013-17 | Sultanpur, India  
Percentage: 80%

## SKILLS

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

## COURSEWORK

- Data Structures 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

- **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.
- **Notable Contributions:** To dynamically load IaaS credentials during runtime.

### ASSOCIATE DEVELOPER

July '20 - March '22

- Designing, implementing and owning critical components of Multi-node etcd-backup-restore
- **Notable Contributions:** Compression of snapshots and Leader Election in Multi-node etcd-backup-restore.
- Also worked as Kubernetes administrator to resolve end-user issues and troubleshoot the cluster.
- Mentored the group of interns and help them to get onboard on Project Gardener.

## 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.