



**DEPARTMENT OF COMPUTER SCIENCE**  
**MATA SUNDRI COLLEGE FOR WOMEN | UNIVERSITY OF DELHI**



CALL FOR REGISTRATION & PARTICIPATION

**30-Hours Short-Term Course (STC)**  
on  
**Docker & Kubernetes**

SEPTEMBER - OCTOBER, 2021  
on  
WEEKENDS ONLY  
16:00 - 19:00 IST (4:00 - 7:00 PM)



# About The College



Mata Sundri College is named after the consort of the Tenth Guru of the Sikhs, Guru Gobind Singh Ji. Mata Sundriji lived here for more than forty years and guided the Sikh Community with sagacity and erudition.

It was established to propagate the great mother's cherished ideals of service, leadership, and academic pursuits among young women with the motto **"Truth is the highest of all virtues but true living is higher still"**. All these years, we have been trying our utmost to keep up the ideals and values established by Mata Sundri Ji.

Mata Sundri College for Women is one of the well-recognized colleges of the University of Delhi. With its extremely well-qualified teaching faculty and an efficient support staff backing them, the college provides an ideal learning environment for young women as they embark on their journey of life, giving shape to their most cherished dreams and wings to their creative pursuits. It is a matter of pride that this institution is a study center of the Non-Collegiate Women's Education Board, University of Delhi. It also serves as a center of Indira Gandhi National Open University.



Department of Computer Science at Mata Sundri College for Women acknowledges the increasing relevance of computing and information science to every academic discipline. Students in our college are encouraged to use the latest technologies, software, and resources. Computer labs equipped with all the resources are available for the students. Our faculty is dedicated and focused to impart knowledge to make students effective problem-solvers and life-long learners.

The Computer Science Society of the department also invites companies on campus to hire students for summer internships and placements. This year there was an upsurge in the total number of recruiters. Students are also motivated to do research and put forward the best ideas which help them develop their analytical skills. Some students have presented their papers and got their work published in national and international conferences.

# Department Of Computer Science



# Cybernauts

## The Tech Society



CYBERNAUTS, the Computer Science society of Mata Sundri College for Women, University of Delhi is engaged in creating a holistic environment and bridging the gap between the world of technophiles and technophobes through a series of workshops, skill-based sessions, technology-oriented programs, events, facts, knowledge sharing, and interactive discussions.

Through such events, we promote and popularise the Computer Science department of Mata Sundri College For Women among various institutions and colleges so that it becomes easy for them to know about us, interact and collaborate with us. These collaborations will help our students to explore and grab more opportunities.

The activities and programs offered by our society continue to respond to changing requirements for professional employment in computer science. The goal is to provide students with the knowledge and tools that will allow them to design and implement effective, economical, and creative solutions for the needs of individuals, society, and the high-tech economy.





# About The Speaker



**Mr. Shubham Tatvamasi**

**Research Associate** at Ramanujan College,  
University of Delhi |

**Magma | 5G | Certified Kubernetes Administrator (CKA)**

- A Certified Kubernetes Administrator (CKA), presently working on the Magma project (an open-source telecom core platform), both as an open-source contributor, and by way of providing consulting services to various companies involved in this project. Apart from this, working in the capacity of a Research Associate on an educational platform using OpenEdX for the University of Delhi.
- 6 years of experience in Software Development (mostly on Linux, Mac, and in OpenSource context) and more than 5 years of Cloud experience on AWS, Google Cloud, IBM Cloud, and OpenStack.
- Actively involved in community-building, organizing Meetups for the official CNCF Delhi group. Furthermore, created the Magma India Meetup group for collaboration and to help developers learn and contribute to the Magma project. Strongly believes in knowledge-sharing and is very much involved in inspiring thousands of people to pursue a career in Cloud Native and Telecom.



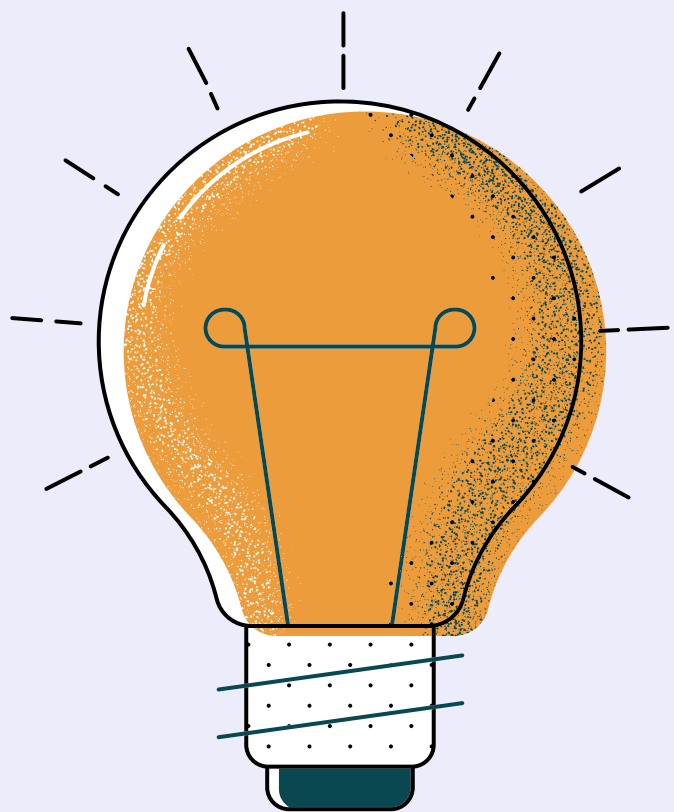
# What is Docker?



## A Software Packaging and Delivery Platform

- It can be installed on any computer to run containerized applications. Containerization is an approach to running applications on an Operating System (OS) such that the application is isolated from the rest of the system.
- Your application can be packed and shipped into containers.
- The Docker Containers allow the developer/sysadmin to bundle an application with all the needed components, resources and to deliver it as an independent and single package.

# Highlights and Objectives



- ✓ Learn Docker from scratch
- ✓ Build your own customised images
- ✓ Master the Docker CLI to inspect and debug running containers
- ✓ Understand how Docker works behind the scenes
- ✓ Learn how to work with data and persist data with volumes
- ✓ Learn how to work with single and multi-container projects
- ✓ Explore container networking - with the outside world and between multiple containers



# What is Kubernetes?



## A Powerful Container Management Tool

- It automates the process of deployment, scaling, managing, updating, and removing containers. In other words, it is a container orchestration platform.
- It is a container scheduler used to deploy and scale your application.



# Highlights and Objectives



- ✓ Understand the purpose and theory of Kubernetes
- ✓ Deploy microservice apps using CLI, YAML, logs, and events
- ✓ Test out different local Kubernetes installs like kind and minikube
- ✓ Recover from a failed update, and rollback updates to previous versions
- ✓ Use various app config options with built-in Kubernetes features
- ✓ Quickly patch YAML with a single command
- ✓ Split up and deploy YAML from git repos using DevOps MLOps practices
- ✓ Monitor all Kubernetes services using Lens

# Motivation to do this course

## DOCKER

Docker and containers have revolutionized the software industry. Since their introduction in 2013, their popularity as a tool & platform has skyrocketed. Companies are adopting Docker at a remarkable rate. As of 2019, 30% of enterprises used Docker in their AWS environment and that continues to grow.



## KUBERNETES

Kubernetes is the market leader and the standardized means of orchestrating containers and deploying distributed applications. This can be run on a public cloud service or on-premises, is highly modular, open-source, and has a vibrant community. Companies of all sizes are investing into it, and many cloud providers offer Kubernetes as a service.



01

As per an online platform, LinkedIn, as of August 5, 2021, there are around 14,000+ Kubernetes and Docker jobs in India.

02

A hands-on workshop conducted by an expert will enable students to gain experience in real-world technologies, viz. Docker and Kubernetes, which in turn will make them ready to secure an internship and/ or a full-time opportunity after college.

03

Moreover, students who will be performing well in these technologies will be provided with Internships.

04

It will enable the students to contribute to many Open-source projects providing a number of benefits like, improvement in Coding skills, gaining real experience, increasing Community and Peer recognition, greater Job prospects, and what not.

# How is it Beneficial for the graduate students?





# Prerequisites



**No Previous Docker or Kubernetes  
experience required!**

**There are no prerequisites for attending this course,  
but it would be beneficial for you to have the  
following knowledge:**

- Virtualization
- Linux & Networking Fundamentals
- Experience with installing and configuring applications

# Eligibility

- The STC is open to all students (UG/PG) from any Indian/overseas university or college and registered Ph.D. research scholars.
- All the participants are requested to register online by visiting <https://mscw.ac.in/> on or before September 6, 2021, by browsing the link given in the registration details below: <https://forms.gle/zKGrJDDZeRM8uxR86>
- Registration for all the participants is mandatory.
- For further queries, please mail us at: [cybernauts.mscw@gmail.com](mailto:cybernauts.mscw@gmail.com)

# Registration Process

- **FIRST STEP:** Participants will fill up the online application form given in the registration link with all the required details. The date of registration is on or before September 6, 2021.
- **SECOND STEP:** After successful registration, the participants will receive a payment link on their registered Email-Id in the first week of September 2021. After payment, confirmation and invitation letters will be sent to registered participants.



# Curious about this course?

**COURSE FEE  
2000 INR**

**REGISTER HERE !!**



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[Department of Computer Science](#)



[@cybernauts.mscw@gmail.com](mailto:@cybernauts.mscw@gmail.com)

Try and Let us know your Experience







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## **ORGANISING TEAM**

- **CO-ORDINATOR**

- DR. KIRANJEET SETHI  
Associate Professor,  
Department of English,  
Course Coordinator  
Department of Computer Science

- **TECHNICAL STAFF**

- MS. SANGEETA PATHAK  
Technical Coordinator

- **PATRON**

- PROF. (DR.) HARPREET KAUR  
(PRINCIPAL)

- **CONVENER**

- DR. NIDHI  
Assistant Professor,  
Department Coordinator,  
Department of Computer Science

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## **TEAM CYBERNAUTS**

- **STUDENT VICE PRESIDENT**

- Ms. Darshpreet Kaur

- **STUDENT GENERAL SECRETARY**

- Ms. Pragati Rawat

- **STUDENT EXECUTIVE MEMBER**

- Ms. Twinkle Karki

- **STUDENT CO-ORDINATOR**

- Ms. Ranveer Kaur

- **STUDENT EXECUTIVE MEMBER**

- Ms. Ananya Jaitly

- **STUDENT EXECUTIVE MEMBER**

- Ms. Astha Kuhikar

