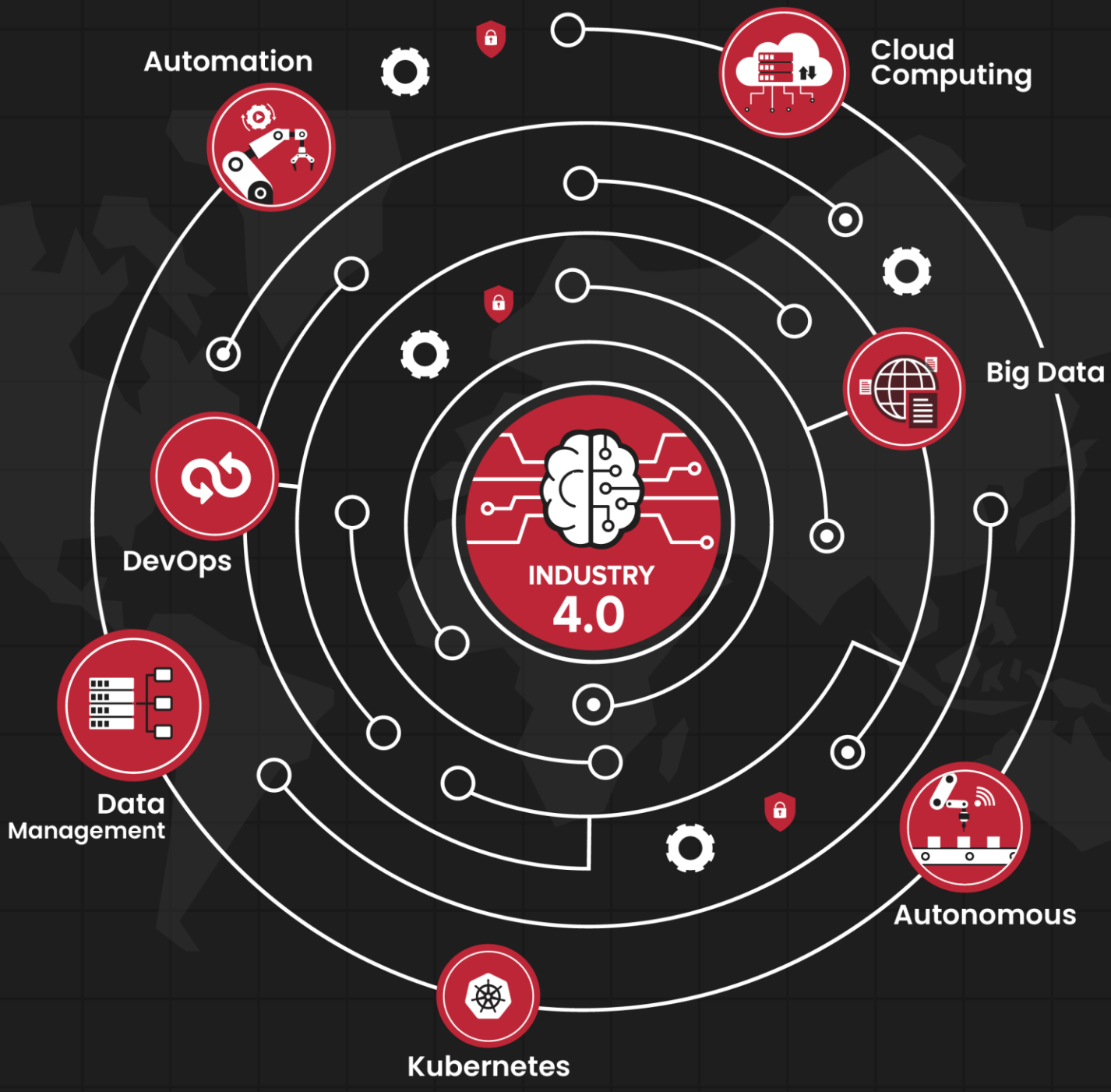
TechieNest
...Transforming Engineers to Technocrats

# Industry 4.0

**Linux | Python | Big Data | Cloud Computing | Devops | Ci/Cd | Kubernetes**




info@techienest.in | www.techienest.in

# INDUSTRY REVOLUTION 4.0

## Disrupting Digital Transformation driven by Intelligent Decisions

*"Implementing solutions by programming with Python to analyze data through Spark and Databricks over AWS Cloud by Dockerizing the environment and creating a CI/CD Pipeline to Automate the entire process"*

Technologies that are emerging today will soon be shaping the world tomorrow and well into the future, with impacts to economies and society to large. In the 1970s computers were invented which allowed us to automate some of the work in the factories and now this fourth revolution known as Industrial Revolution 4.0 or 4IR has just started which is not about individual computerized machines but a whole network of these machines which are connected and able to talk with each other. It has replaced brain power with machine intelligence.

The smart machines used in industries now have sensors in them and are connected so they can easily diagnose their own problems and give an alert that something is wrong in the machine so that the problem can be resolved. It's all about connectivity. It has completely changed the way industry used to respond to the needs of society.

## Why should you learn this?

- It offers higher productivity
- Ordering a cab, making a payment, booking a flight, buying a product, listening to music, watching a movie, controlling the lights and temperature in house are some of the services that are offered by industry revolution 4.0.
- Technologies underlying 4IR are creating new markets and growth opportunities.
- This course will mainly emphasis on making learners understand the power of the major changes that this revolution has made and how those changes can be adopted to build a cyber physical system

The curriculum is designed according to the latest trends in technology and Industry Demands. The Fee structure is mentioned below:

| | |
|---|---|
| ***DURATION*** | **6 Week (120 Hours)** |
| ***FEES + (Tax 18%)*** | **INR 5999 + 1080 i.e. (INR 7079/-)** |

# COURSE HIGHLIGHTS

## Projects Covered:

1. *Voice controlled automation system using python socket*
2. *Data analysis of corona data using bigdata and apache spark over AWS cloud*
3. *Microservice designer with nodeJS and redis for users registration using docker container technology*
4. *Gitops and CI/CD pipeline designing for python and other web applications and deployment on top of k8s*
5. **CAPSTONE PROJECT:** "**DevOps lifecycle management for containerization using Azure DevOps and Kubernetes**"

## Technologies Covered:

1. *Big Data*
2. Data Analytics
3. *Cloud Computing*
4. *Machine Learning*
5. *AI*
6. *DevOps*

**NOTE**

***Apart from the Course Content, we are organizing special sessions on Resume Writing, Soft Skills, Personality Development and Mock Interview Sessions for our techies***

| INDUSTRY REVOLUTION 4.0 | | | |
|---|---|---|---|
| **Duration – 6 Weeks (120 Hours)** | | | |
| 1 | **Linux Never Before** | • Getting started with Linux kernel<br>• Deep dive with linux flavours<br>• Installing Centos / fedora<br>• Basic command<br>• Shell deep dive<br>• IO redirection<br>• User management & permission<br>• Partition & LVM<br>• Software installer yum & dnf<br>• Server management with ssh, ftp, httpd & nfs<br>• MariaDB database<br>• **Exercise – 1** | 25 Hours |
| 2 | **Python** | • Python getting started<br>• Variables and data types<br>• Loops and conditional statements<br>• Functions & classes<br>• Python with database connection<br>• Python cgi for web applications<br>• Python web apps using either / flask / Django<br>• **Exercise – 2**<br>• ***Project 1: "Voice controlled automation system using python socket."*** | 15 Hours |
| 3 | **Big Data & Data Analytics** | • *Cloudera & hortonworks platform*<br>• *HDFS & YARN*<br>• *Apache spark*<br>• *Databricks*<br>• *Tableau*<br>• **Exercise – 3** | 20 Hours |
| 4 | **Cloud Integration** | • AWS cloud services<br>• IAAS ec2, ebs<br>• ELB & EBS<br>• Azure devops<br>• Azure vm<br>• Azure networking<br>• **Exercise – 4**<br>• ***Project 2: "Data analysis of corona data using bigdata and apache spark over AWS cloud"*** | 10 Hours |
| 5 | **DevOps Containerization Approach** | • What are containers<br>• Understanding windows and linux containers<br>• Installing docker \| podman for container platform<br>• Creating and managing containers using docker cli \| webUI \| API | 25 Hours |

| | | | |
|---|---|---|---|
| | | • Docker deep dive<br>• Docker desktop and other approach<br>• Docker based container management<br>• Docker in cloud environment<br>• Podman same content<br>• ***Exercise – 5*** | |
| 6 | **Docker Compose** | • Understanding and using docker compose<br>• Integration with github<br>• Docker compose with database and multiple application<br>• Compose tips for students and professional<br>• Infrastructure as code Json and YAML for IAC<br>• ***Exercise – 6***<br>• ***Project 3: "Microservice designer with nodeJS and redis for user registration using docker container technology"*** | 5 Hours |
| 7 | **Container Orchestration Kubernetes** | • Understanding production grade container orchestration<br>• Minikube based deployment cluster<br>• Understanding pod and deploying of application<br>• Scaling application using k8s<br>• Overview of k3s and k8s<br>• WordPress deployment using k8s<br>• Deployment using ACR & docker hub<br>• ***Exercise – 7***<br>• ***Project 3: "Devops lifecycle management for containerization using Azure Devops and kubernetes"*** | 10 Hours |
| 8 | **Azure DevOps** | • *Integration azure DevOps with technology*<br>• *Azure boards*<br>• *Azure build and pipeline*<br>• ***Exercise – 8*** | 5 Hours |
| 9 | **CI/CD** | • Introduction to CI and CD<br>• About Jenkins and other CI/CD tools<br>• Jenkins history<br>• SDLC discussion<br>• Configuring Jenkins<br>• Agile Development<br>• Jenkins over cloud<br>• Jenkins over containers<br>• CLI access and authentication management<br>• ***Exercise – 9***<br>• ***Project 5: "GitOps and CI/CD pipeline designing for python and other web applications and deployment on top of k8s"*** | 5 Hours |

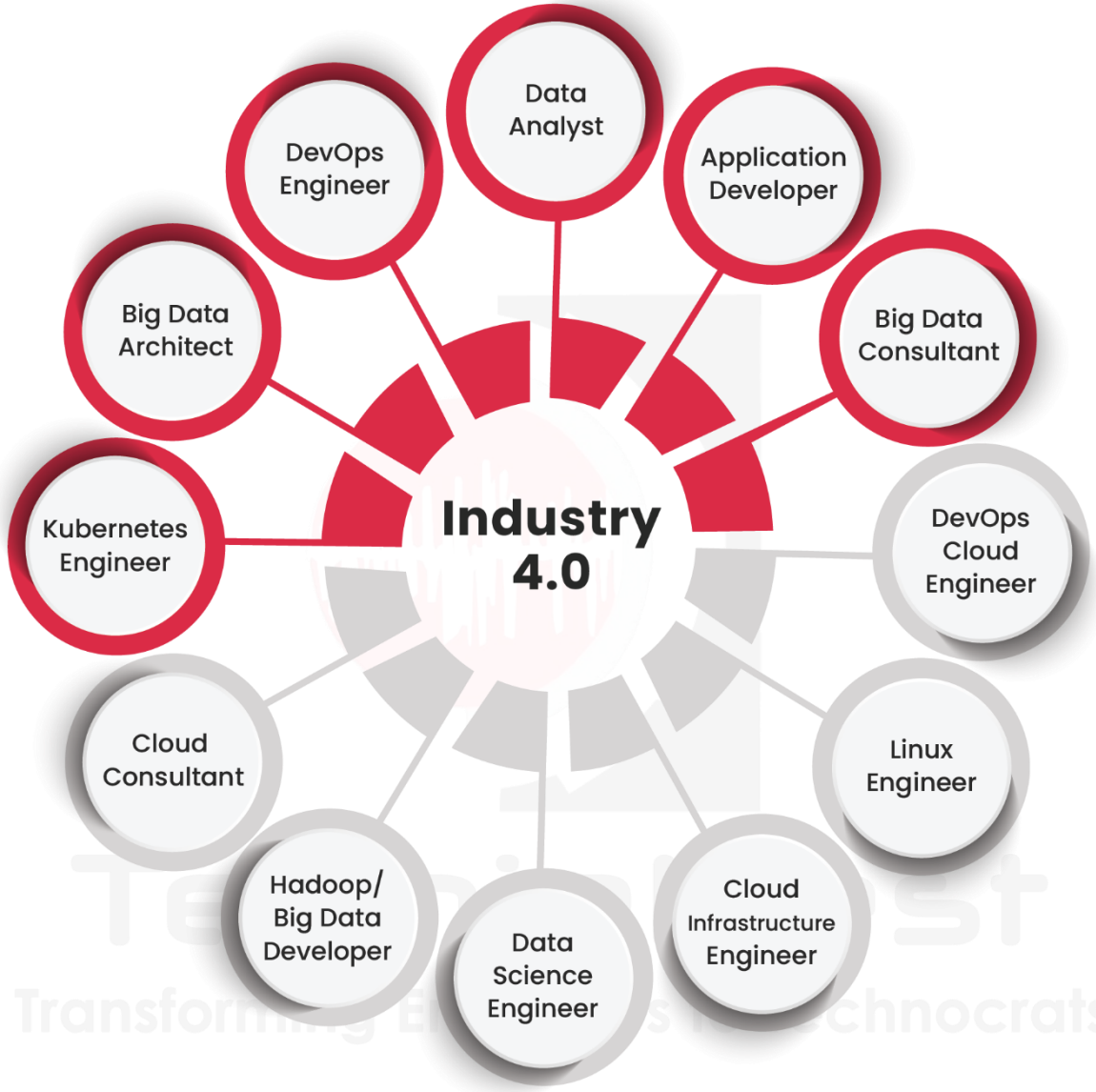
TechieNest
...Transforming Engineers to Technocrats

# Why This Course?

1. Real Time Projects
2. To Get Technical Knowledge
3. Job Ready within 2 months
4. Work on Live Project
5. 100% Career Oriented
6. Authentication Certificate after completion
7. Exposure to Industrial Methodology
8. Career Oriented Training In Dept Course Designed By Industry Experts Based On Current Job Requirements

TechieNest
...Transforming Engineers to Technocrats

# Career Opportunities in Industry 4.0




# Top Skills Needed

**for high paying Career in Industry 4.0**

- Service Orientation
- Troubleshooting
- System Analysis
- Programming Skills
- Networking
- Critical Business Planning
- Technology & User Experience Design

TechieNest
...Transforming Engineers to Technocrats

# Areas Of Boom


## Why TechieNest?

- TechieNest is one of the finest platforms in providing industrial training & internship in most demanding fields of current generation like Machine Learning, Artificial Intelligence, Embedded Systems & Robotics, Internet of Things, etc.
- TechieNest helps in strengthening the roots and provide deep knowledge to students hence we are the trusted choice of several IITs(like Bombay, Delhi, Roorkee, Kanpur, Jodhpur, Bhubaneshwar, BHU, Patna and many more), NITs, IIITs and other dreamed universities.
- We have an experience of 7+ years in the domain of technical education, and we have trained more than 64.5k+ students on these trending technologies.
- Instructors at TechieNest are well accomplished industry experts having lucrative experience of more than 25+ years. They take care of the needs and demands and any updation in terms of content, technologies or technicalities of the industry.
- We not only concentrate on technical skills, but we take care of the overall development of our students.
- TechieNest helps you in getting an extra edge in these demanding technologies of the industry.

info@techienest.in | www.techienest.in

TechieNest

...Transforming Engineers to Technocrats

This Summer transform yourself into Technocrats

# ONLINE SUMMER INDUSTRIAL TRAINING/ INTERNSHIP 2021

**Batch: 15th May | 26th May | 8th June, 2021**

| Industry 4.0 | Artificial Intelligence | Machine Learning & Data Science | Embedded + IoT |
|---|---|---|---|
| Fees: 5999 + Taxes | Fees: 5999 + Taxes | Fees: 3999 + Taxes | Fees: 5000 + Taxes |

1. BigData Analytics | AWS Cloud | DevOps | CI/CD (Jenkins) | Python Programming (120 hours)
2. Artificial Intelligence | Computer Vision | Python | Machine Learning | Deep Learning | Natural Language Processing | Tensorflow | Keras (120 hours)
3. Data Science | Machine Learning | Deep Learning | Python (70 hours)
4. Arduino Programming | Networking | Python | Web Development | Flutter Apps | IoT (60 hours)

## Follow us on

Plot No. 262, Ground floor, Muktanand Nagar Opposite pooja tower, Gopalpura Mode, Jaipur, Rajasthan 302018 | Contact us @+91 9251494002

info@techienest.in | www.techienest.in