CASTle

TRAINING
LEARNING
EMPOWERMENT

CAS-tle Research Centre COURSE CONTENTS

→ Learn more about future

Contact

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About CAS-tle

CASTLE is all about discovering and nurturing young talents through comprehensive training and learning opportunities. Our aim is to empower them to secure promising placements within and beyond our organization, fostering a culture of empowerment and creating global opportunities.

Why CAS-tle

- Castle offers practical, real-world training.
- Learning happens through hands-on projects.
- It's like learning to cook by doing recipes, not just watching.
- This approach boosts engagement and skill development.

Mission / Vission

Program Goal: Prepare fresh graduates and professionals to thrive in today's job market.
Approach: Hands-on training and shadowing experienced professionals.
Impact: Already helped 50 candidates launch their careers.
Expansion Plan: Aim to reach more candidates and empower them with industry insights.
Outcome: Empowering the next generation for individual and workforce competitiveness.

COURSE FLOW

1. Classroom
2. Assessment
3. Certification
4. Internship
5. Placement

ENROLLMENT PROCESS

Aptitude test

↓

Telephonic interview

↓

Technical assessment

CAS-tle's Clients

Yavar
A NETCON ENTERPRISE

QBRAINX
Transforming You

Kaar

اسیاد
ASYAD

IBM

MT

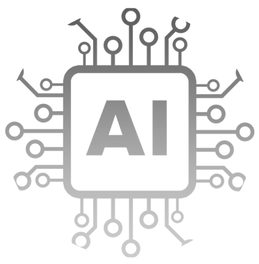
ITC INFOTECH
Business-friendly Solutions

sodexo

ERPROOTS

Courses Offered

All our trainers have closely worked with our clients and do have industrial experience of 6-7 years.

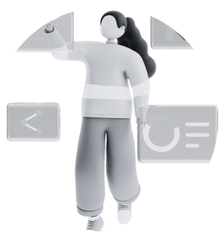


Artificial Intelligence (AI)

Trainers- Divyaa, Koyeli , Suvojit

SAP

Trainers- Arvind, Bala, Karthik, Susheel , Sourav



Data Analytics & Power BI

Trainers- Samrose , Rubini ,Sujatha

Data Science

Trainers- Koyeli , Divyaa

Data Engineering

Trainers- Nagarjun ,Ramesh , Swaminathan

AR/VR

Trainers- Kumar, Sambhav, Nimrah

Program Curriculum

Data Science

Module 1

- Preparatory Sessions - Python & Linux
- Python
- Introduction to Python and IDES
- Python Basics
- Object Oriented Programming
- Hands-on Sessions And Assignments for Practice
- Introduction to Linux
- Linux Basics
- Hands-on Sessions And Assignments for Practice

Module 2

- Data Wrangling with SQL
- SQL Basics
- Advanced SQL
- Deep Dive into User-Defined Functions
- SQL Optimization and Performance

Module 3

- Python With Data Science
- Extract Transform Load
- Data Handling with NumPy
- Data Manipulation Using Pandas
- Data Preprocessing
- Data Visualization

Module 4

- Linear Algebra and Advanced Statistics
- Descriptive Statistics
- Probability
- Inferential Statistics

Module 5

- Machine Learning
- Introduction to Machine Learning
- Regression
- Classification
- Clustering

Module 6

- Supervised Learning
- Linear Regression
- Logistic Regression
- Decision Tree
- Random Forest
- Support Vector Machine
- Gradient Descent
- K-Nearest Neighbors
- Time Series Forecasting

Module 7

- Unsupervised Learning
- K-means
- Dimensionality reduction
- Linear Discriminant Analysis
- Principal Component Analysis
- Performance Metrics
- Classification reports
- Confusion matrix

Module 8

- Deep Learning Using TensorFlow
- Artificial Intelligence Basics
- Neural Networks
- Deep Learning

Module 9

- Data Science Capstone Project
- Extracting, loading and transforming data into usable format to gather insights.
- Data manipulation and handling to pre-process the data.
- Feature engineering and scaling the data for various problem statements. selection and model building on various classification, and regression problems using supervised/unsupervised
- machine learning algorithms.
- Assessment and monitoring of the model created using the machine learning models.

Duration- 2 Months + 30 days shadowing

Course fee- 56,999 /-

Trainers- Ms.Koyeli ,Ms.Divyaa

Data Analytics

Module 1

- SQL
- Introduction to SQL
- Database Normalization and Entity Relationship
- Model(self-paced)
- SQL Operators
- Working with SQL: Join, Tables, and Variables
- Deep Dive into SQL Functions
- Working with Subqueries
- SQL Views, Functions, and Stored Procedures
- Deep Dive into User-defined Functions
- SQL Optimization and Performance
- Advanced Topics
- Managing Database Concurrency
- Practice Session
- Case Study

Module 2

- Python
- Introduction to Python and IDES
- Python Basics
- Data Manipulation with Numpy, Pandas, and Visualization
- Case Study

Module 3

- Statistics And Probability
- Descriptive Statistics
- Probability
- Inferential Statistics
- Case Study

Module 4

- Machine Learning
- Introduction to Machine Learning
- Regression
- Classification
- Clustering
- Supervised Learning
- Unsupervised Learning

- Performance Metrics
- Time Series Forecasting

Module 5

- Performance Metrics
- Classification reports - To evaluate the model on various metrics like recall, precision, f-support, etc.
- Confusion matrix - To evaluate the true positive/negative, and false positive/negative outcomes in the model. r2, adjusted r2, mean squared error, etc.

Module 6

- Time Series Forecasting
- Making use of time series data, gathering insights and useful forecasting solutions using time series forecasting.

Module 7

- Business Problem Solving, Insights and Storytelling
- Business Domains
- Understanding the business problems and formulating hypotheses
- Exploratory Data Analysis to Gather Insights
- Data Storytelling
- Case Study

Module 8

- Data Modeling
- Feature Selection
- Feature Engineering
- Model Tuning

Module 9

- Data Analytics Capstone Project
- Problem Statement and Project Objectives
- Approach to the Solution
- Optimum Solutions
- Evaluation Metrics
- Gathering Actionable insights

Module 9

- Business Case Studies
- Customer Churn
- Sales Forecasting
- Census
- Predictive Modeling
- HR Analytics
- Dimensionality Reduction

Duration- 2 Months + 30 days shadowing

Course fee- 56,999 /-

Trainers - Ms. Samrose, Ms. Rubini, Ms. Sujatha

Data Engineering

Module 1

- SQL
- Introduction to SQL
- Database Normalization and Entity Relationship Model
- SQL Operators
- Join, Tables, and Variables in SQL
- Deep Dive into SQL Functions
- Subqueries in SQL
- SQL Views, Functions, and Stored Procedures
- User-defined Functions in SQL
- SQL Optimization and Performance
- SQL Parsing
- Managing Database Concurrency

Module 2

- Python
- Python Basics
- OOPS Concept
- NumPy
- Pandas
- Data Visualization
- File Handling
- Exception Handling
- Regular Expressions Fundamentals

Module 3

- Linux
- Introduction to Linux
- File System Navigation
- File and Text Manipulation
- User and Group Management
- Process Management
- System Configuration and Networking
- System Monitoring and Logging
- Shell Scripting
- Security and Permissions
- Advanced Linux Commands

Module 4

- SQL-based Data Integration and Data Pipeline Management
- Introduction to Data Warehousing
- Data Cleaning Techniques
- SQL Connectors and Data Integration
- Building Data Pipelines
- Data Quality and Governance in Data Warehousing
- Performance Optimization in Data Warehousing
- Emerging Trends in Data Warehousing

Module 5

- Data Modelling
- Basic Concepts of Data Modelling
- Business Data Requirements - Entities and Classes
- Business Data Requirements - Attributes
- How To Link Things Together - Relationships
- Requirements Analysis
- Conceptual Data Modeling
- Logical Data Modeling
- Physical Data Modelling
- Data Modelling Tools and Techniques
- Data Modelling Documentation and Communication

Module 6

- Distributed Data Processing - Hive with Impala
- Introduction to the Hadoop Ecosystem
- HDFS (Hadoop Distributed File System)
- Apache Hive for Data Warehousing and Querying
- Apache Impala for High-Performance
- Working with Big Data using Hadoop and Hive Integrating Hive with Other Tools and Systems
- Working with Cassandra in Hadoop Ecosystem • Advanced Topics in Hadoop and Hive

Module 7

- AWS Big Data
- AWS Basics
- Amazon Kinesis
- Amazon MSK (Managed Streaming for Apache Kafka)
- AWS Glue
- Amazon EMR (Elastic MapReduce)
- Amazon $3 (Simple Storage Service)
- Amazon S3 Glacier
- DynamoDB
- AWS Redshift
- Amazon Athena
- Amazon QuickSight

Module 8

- Azure Data Engineering
- Introduction to Microsoft Azure
- Authentication, Authorization, and Monitoring
- Data Storage and Integration
- Azure Synapse Analytics and Databricks
- Azure Stream Analytics, and Azure Service Bus

Module 9

- PySpark
- Introduction to Apache Spark
- PySpark SQL and Data Frames • Apache Kafka and Flume
- PySpark Streaming
- Introduction to PySpark Machine Learning

Module 10

- SSIS for Data Engineering
- Introduction to SSIS and Data Engineering
- SSIS Architecture and Components
- SSIS Package Development
- Data Extraction in SSIS
- Data Transformation in SSIS
- Data Loading and Destination in SSIS
- Advanced SSIS Transformations and Tasks
- Error Handling and Logging in SSIS
- SSIS Package Deployment and Execution
- Performance Tuning and Optimization in SSIS
- Advanced SSIS Features and Integration SSIS Deployment and Maintenance

Module 11

- DevOps
- Introduction to DevOps
- Git
- Docker
- Kubernetes
- Jenkins

Duration- 2 Months + 30 days shadowing

Course fee- 56,999 /-

Trainers- Mr. Nagarjun, Mr. Ramesh,
Mr. Swaminathan

Artificial Intelligence

Module -1

- Introduction to AI
- Overview of AI concepts and history.
- Introduction to problem-solving techniques.
- Basics of machine learning, deep learning & Gen AI

Module-2

- Mathematics and Statistics for AI:
- Linear algebra: Vectors, matrices, and operations.
- Basic Statistics
- Probability and statistics: Probability distributions, hypothesis testing, and statistical inference.

Module-3

- Basic SQL
- Data Handling & Cleaning
- Basic Joins
- Feature Engineering

Module-4

- Machine Learning Fundamentals:
- Supervised learning: Regression, classification, and model evaluation.
- Unsupervised learning: Clustering, dimensionality reduction, and anomaly detection.
- Reinforcement learning: Markov decision processes, Q-learning, and policy optimization.

Module-5

- Deep Learning:
- Neural networks architecture: Feedforward, convolutional, recurrent, and attention mechanisms.
- Training neural networks: Backpropagation, optimization algorithms, and regularization techniques.
- Recommendation Engine
- Deep learning frameworks: TensorFlow, PyTorch, and Keras.

Module-6

- Natural Language Processing (NLP):
- Text processing: Tokenization, stemming, and lemmatization.
- Language modelling: n-grams, word embeddings, and transformer models.
- NLP applications: Sentiment analysis, named entity recognition, and machine translation.
- BERT & LLM

Module-7

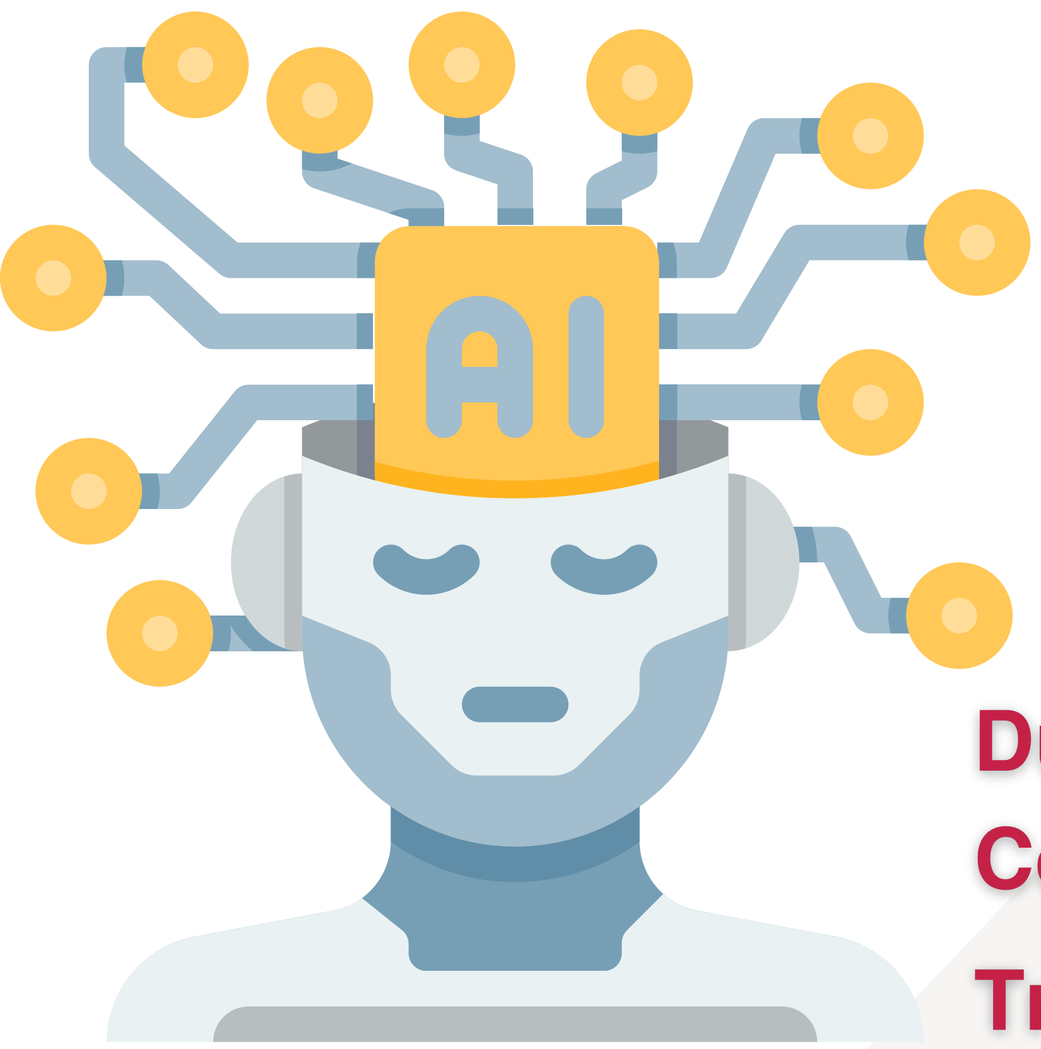
- Image processing: Filters, edge detection, and feature extraction.
- Convolutional Neural Networks (CNNs): Architectures like AlexNet, VGG, and ResNet.
- Object detection and image segmentation.
- Video Analytics Basics

Module-8

- Advanced Topics:
- Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs).
- Model deployment and scaling.

Module-9

- Project work
- Applying learned concepts to solve real-world problems.
- Developing and implementing an AI project from scratch.



Duration- 2 Months + 30 days shadowing

Course fee- 60,999 /-

Trainers- Ms. Divyaa, Ms. Koyeli, Ms. Suvojit

SAP - Ariba

Module -1

- Ariba Introduction
- Introduction and Ariba Overview and Landing Page Navigation
- Ariba Cloud System Architecture
- About Ariba Network and various modules introduction (Upstream and Downstream)

Module -2

- Supplier Life cycle & performance (SLP)
- Supplier Request (External and Internal)
- Supplier Registration
- Supplier Qualification, Disqualification
- Preferred Supplier
- Supplier activation and deactivation
- SM Modular Questionnaire and Certificate management
- Supplier IDs (ANID, ERP ID, VDR ID)
- Overview of SLP integration from the Ariba side
- Supplier Performance management
- Supplier Risk

Module -3

- Ariba Upstream (Sourcing)
- Getting Started with Ariba Sourcing
- Event Management: Creating RFI, RFP and Auctions
- Template creation and setting up the tasks
- Setting up the approval flow (Serial, Parallel, and Custom)
- Advanced features in Sourcing such as working with Excel
- Award Scenarios and Awarding Sourcing Event
- Creating contract workspace from a Sourcing event
- Full cycle of the Bidding Process
- Ariba discovery posting
- Hands-on workshop
- Module -4
- Ariba Contract Management (Contract Workspace - Upstream)
- Getting Started with Ariba Contracts
- Integration with Ariba Sourcing
- Ariba Contract Management: Creating Contracts

- Hierarchy Type (Master Agreement, Sub agreement, and Standalone Agreement)
- Clause Library
- Contracts Attributes and CLID
- Template creation
- Contract Amendments
- Hands-on workshop

Module-5

- Ariba Contract Compliance (Contract Terms – Downstream)
- Contract Terms Creation
- Contract Automatic Subscription Creation
- Contract Release Order
- Contract based invoice
- Term based Pricing
- Tiered based pricing
- Milestone pricing
- Contract Amendments

Module-6

- Ariba Downstream: Buying/Procurement and Invoicing
- Ariba Procurement solution features
- Catalog and Non-catalog Requisitions
- Guided buying
- Full End to end-to-end procurement Process (PR, Approval Flow, PO, GR, SES, invoice, Payment)
- Ariba Procurement: Creating and Managing Invoices, Invoice Reconciliation
- Invoice: Different Types (PO based, Non-PO, Contract invoice)
- Master Data Files
- Hands-on workshop

Module-7

- Anadministration/Core administration
- a. Template Management & Configurations
- Sourcing template & contract template configuration
- Set-up bidding rules
- Condition set-up to display documents
- Display of document
- Project group vs system groups

- Approval rule set-up
- Task assignment
- Team set-up
- b. Approval workflow Configurations
- Serial approval configuration
- Parallel approval configuration
- Custom approval configuration
- How to assign workflow
- c. Site Manager & Configurations
- About site manager
- Data dictionary
- How to verify the upload data
- Enumerations
- d. User Management and Configurations
- Creation of New User
- Delegation of authority
- Creation of Groups
- Purchasing unit assignment
- e. Catalog Manager & Configurations
- Creation of catalog item
- Catalog validation
- What is a punch-out catalog
- f. P2P Manager & Configurations
- Invoice Exception types
- About receiving types
- Payment terms
- Tax codes
- g. Supplier Manager
- Common Supplier Vs Partitioned Supplier
- Supplier set-up for purchasing
- Concept of partitioned supplier
- How to set up partitioned supplier

Module-8

- Reporting
- pre-packaged and Analytical reports
- Reporting - Customization and Configuration
- Reporting - Scheduling Background job
- Reporting - Personal Vs public workspace

Module -9

- Integration
- Integration Overview
- Integration Landscape
- SAP Cloud Connector Setup and SPRO Global Settings
- Overview of Integration Manager and Configurations
- Overview of Integration system - Ariba Cloud Integration Gateway (CIG)
- Mappings and transaction tracker overview
- Overview of file channel and Web services

Module -10

- SAP Business Network (Ariba Network Buy Side)
- Business endpoint configuration and document routing
- Ddefault Transaction rules and Supplier Groups
- Supplier Enablement and Trading relationship request
- Buyer User Interface - Monitor Transaction documents
- Reporting

Module -11

- Ariba Commerce Automation
- SPRO nodes for Business network integration setup
- Partner Profiles and IDOC Overview
- Full End to End Procurement Process (PR, PO, GR, SES, invoice and Payment)

Module -12

- Ariba Supply chain colloboration
- Core Configuration and Administration
- Purchase Order Collaboration
- Return collaboration
- Scheduling agreement collaboration
- Consignment collaboration
- Subcontracting collaboration and Multi-tier orders
- Add-on Modules
- planning collaboration
- Quality inspection collaboration
- Supplier Managed Inventor

Module -13

- SAP Business Network (Supplier Side)
- AN Supplier overview and dashboard
- Sourcing and Proposals
- Contracts submission
- Business network transactions (OC, ASN, SES, Invoice)
- Standard and Enterprise accounts

Module -14

- Provide a soft copy of standard handbooks of Ariba as study material
- All the sessions will be recorded and will get the recording
- Ariba Resume preparation
- Type of interview questions

Duration & course fee*

UPSTREAM	- 30 days + 30 days shadowing	--- 20,000 /-
CIG	- 30 days + 30 days shadowing	--- 20000 /-
DOWNSTREAM	- 45 days + 30 days shadowing	--- 25000 /-

Trainers- Mr. Arvind, Mr. Bala,
Mr. Karthik, Mr. Susheel,
Mr. Sourav.

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