

StatusNeo

DEALING
WITH
AI/ML

JioInstitute

WE BUILD & MANAGE YOUR DATA
PIPELINES

PROPOSED BY
Team StatusNeo

About the company

StatusNeo

Headquartered in the United States, StatusNeo is a Cloud Native Technology Consulting and Solutions firm with keen expertise and excellence in the following :

- SOFTWARE-AS-A-SERVICE (SAAS)
- FUNCTION-AS-A-SERVICE (SERVERLESS) & API'S
- DEVSECOPS & AIOPS
- AI & DATAOPS
- MOBILE APPLICATIONS THAT CONNECT TO CLOUD SERVICES & API'S
- TEST AUTOMATION FOR CLOUD NATIVE STACK



Engagement Model

Fixed
Price

Maturity Scans

- ✓ Cloud Architecture
- ✓ Microservices & APIs
- ✓ DevSecOps & CI/CD
- ✓ State of Scaled Agility (Scaled VS Spotify)
- ✓ Cloud Data Platforms & DataOps
- ✓ Tools Rationalisation

Time &
Mater

Capability Building

- ✓ Cloud Native Microservices & APIs
- ✓ Full Stack ~ Omni Channel Solutions
- ✓ DevSecOps & AIOps
- ✓ AI/ML & Data Software Engineering
- ✓ Test Automation

Fixed
Price

Managed Services

- ✓ Site Reliability Engineering (SRE)
- ✓ NOC & AIOps
- ✓ Test Data Management
- ✓ AI & Data Science Workbench
- ✓ DataOps Powered Central Data Platforms

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING DEEP DIVE FOR SOFTWARE ENGINEERS



ABOUT THE TRAINING

BY OUR DATA LEADERS

After taking this course participants will be able to apply **practical machine learning algorithms** to different datasets, **measure performance** and **build pipelines to automate** the end to end process.

This course is next step in "**AI and ML**" learning path. Participants who have taken Artificial Intelligence and Machine Learning Fundamentals for Software

Engineer prerequisite course.

With more than a decade of experience leading and managing Machine Learning Platforms of different sizes, scale & complexity, this is a **course by StatusNeo** that prepares you to become a successful Data Scientist.

THE SYLLABUS

TABLE OF CONTENTS

Regression

KNN, Decision Trees

Ensemble Learning

Naive Bayes, NLP

PCA, KMeans Clustering

Pipelines, Tuning & Hackathon

COURSE OUTLINE

Session 1: Overview of Model Deployment

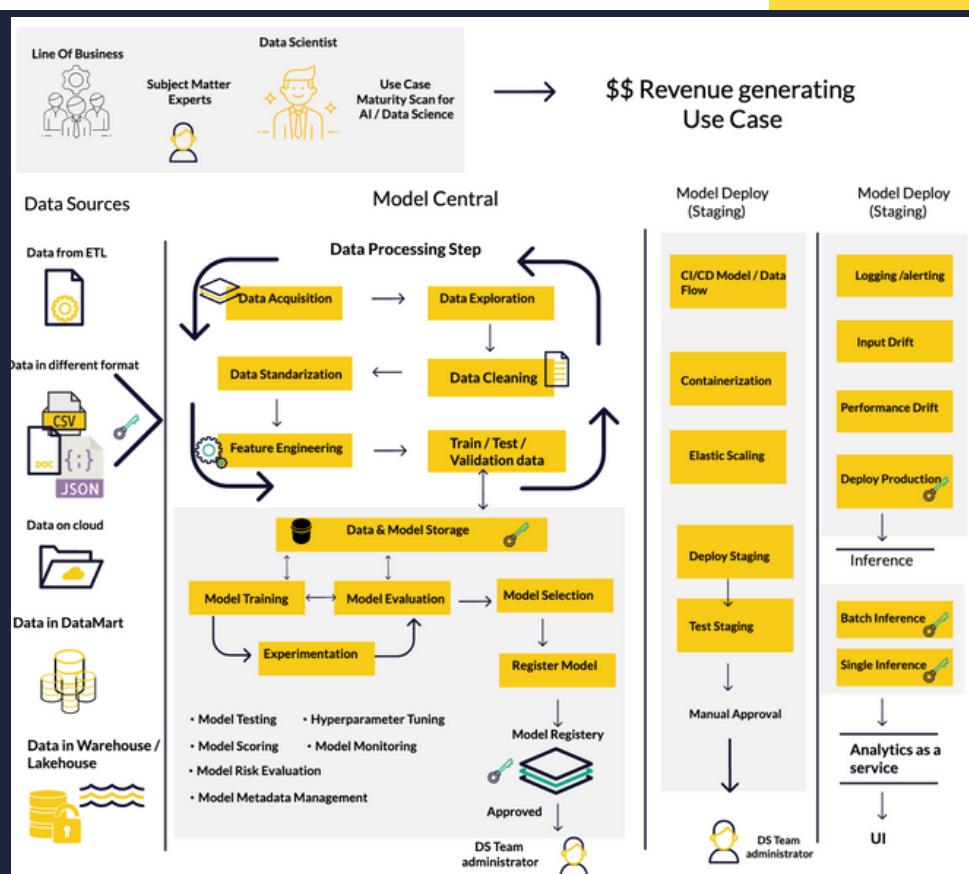
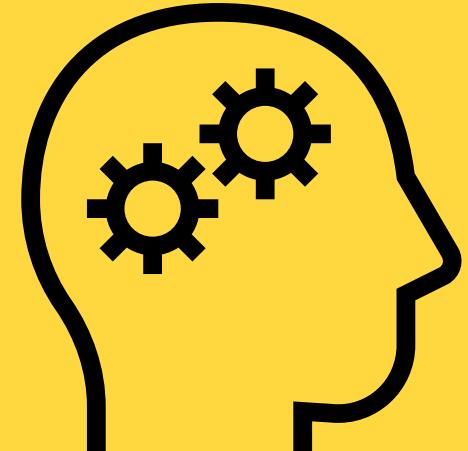
- Deployment of ML Models
- Deployment of Machine Learning Pipelines
- Research and Production Environment
- Building Reproducible Machine Learning Pipelines
- Challenges to Reproducibility
- Streamlining Model Deployment with Open-Source
- Additional Resources

Session 2: Machine Learning System Architecture

- Machine Learning System Architecture and Why it Matters
- Specific Challenges of Machine Learning Systems
- Principles for Machine Learning Systems
- Machine Learning System Architecture Approaches
- Machine Learning System Component Breakdown

Session 3: Research Environment - Developing a Machine Learning Model

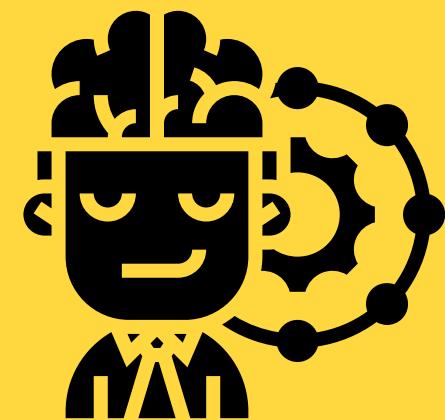
- Research Environment – Process Overview
- Machine Learning Pipeline Overview
- Feature Engineering – Variable Characteristics
- Feature Engineering Techniques
- Feature Selection
- Training a Machine Learning Model
- Data analysis demo – missing data, temporal data, numerical data, categorical variables
- Feature engineering demo and storing the features
- Feature engineering pipeline demo
- Create and end to end Pipeline for Classification



COURSE OUTLINE

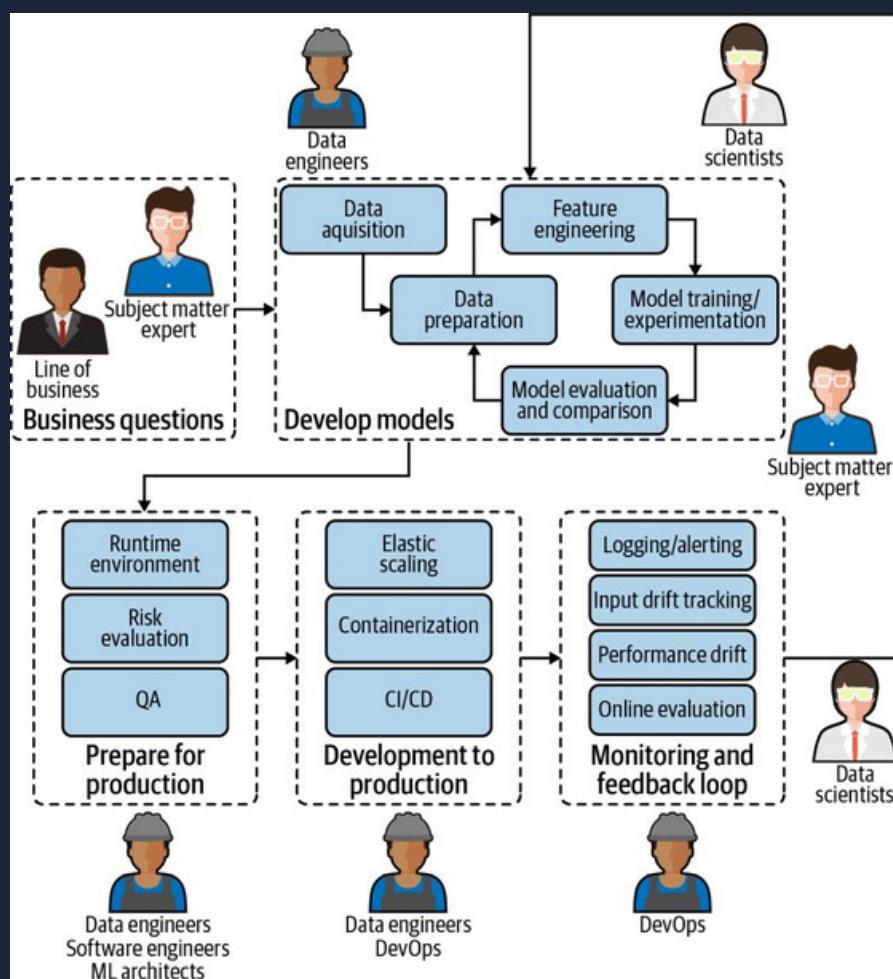
Session 4: Packaging the Model for Production

- Introduction to Production Code
 - Understanding the reasoning behind the production code
- Package Requirements Files
- Working with tox and pytest
- Package Config
- The Model Training Script & Pipeline
- Feature Engineering Code in the Package
- Making Predictions with the Package
 - Building the package
 - Necessary Tools required to build the package
- Hands On Assignment: Get The Titanic Classification Model Ready for Prod



Session 5: Serving and Deploying the model via RestAPI

- Understanding the architecture of the API
 - Running the API locally
- Introduction to FastAPI
 - The API Endpoints
 - Using Schemas in our API
- Implementing logging in our Application



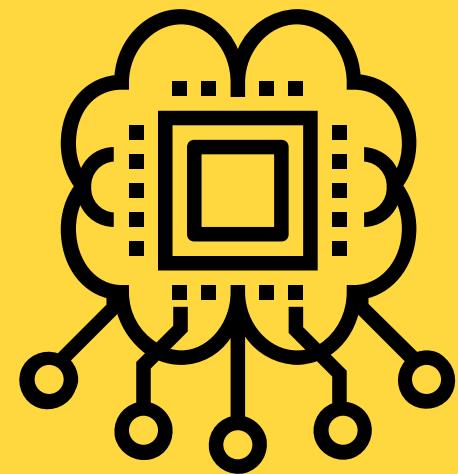
COURSE OUTLINE

Session 6: Deploying the ML API with Containers

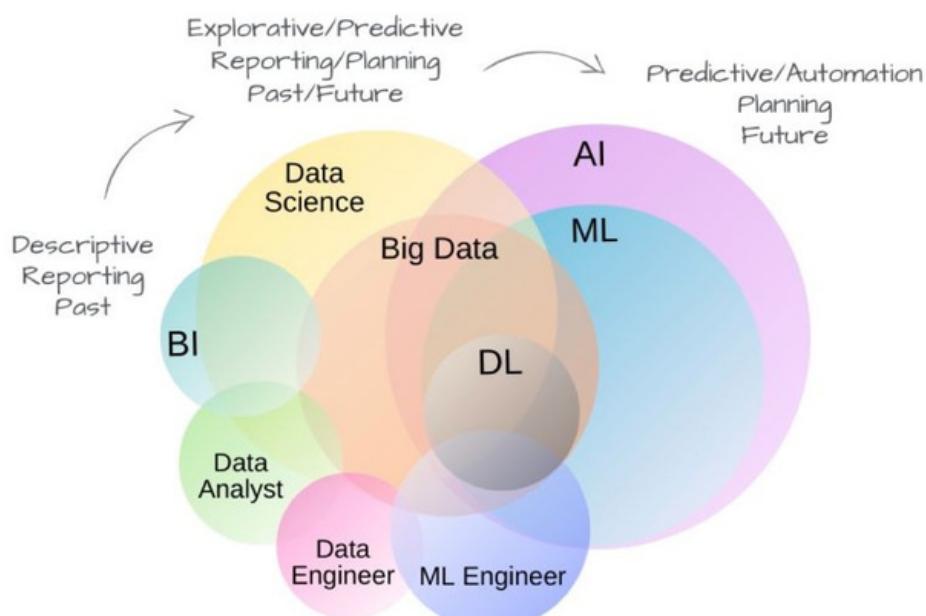
- Docker Concept
 - The value of docker and containerisation
- Understanding The Container Deployment Process
 - Docker Setup / Installation
- Hands On: Containerising the App Locally
- Updating the CI Pipeline for a Container Deployment

Session 7: Deployment to AWS ECS

- Introduction to AWS
 - AWS Cost & Caution
- Intro to AWS ECS
- Container Orchestration Options: Kubernetes, ECS, Docker Swarm
- Create an AWS Account
 - Setting Permissions with IAM
 - Configuring the AWS CLI
 - Installing the AWS CLI
- Intro the Elastic Container Registry (ECR)
 - Uploading Images to the Elastic Container Registry (ECR)
 - Creating the ECS Cluster with Fargate Launch Method
- Updating the Cluster Containers
- Tearing down the ECS Cluster
 - Deploying to ECS via the CI pipeline



AI, Big Data and Everything in Between



ABOUT OUR INSTRUCTORS

Our instructors have experience in implementing Cloud/ML/AI/Big Data Science related projects. Our few instructors are **official instructor for Google, Confluent, and Cloudera.**

We have expertise in **knowledge sharing sessions across various domains in various companies like Google Singapore, Starbucks Coffee Seattle, Adobe India**, and many other Fortune 500 companies.

We get our instructors to learn and update themselves with upcoming technologies like AI, Big Data Analytics and Data Engineering projects involving Spark, Confluent Kafka, Google Cloud, Azure, Snowflake and Cloudera stack. Our instructors our hands on coaches as they have implemented end-to-end data science projects, from content acquisition to production deployment.



ABOUT US

We are an agile Big Data, Machine Learning and Artificial Intelligence Consultancy firm with keen expertise in sharing knowledge and transforming teams.

"THIS IS A WORLD CLASS CURRICULUM THAT HAS BEEN CURATED AND DELIVERED BY EXPERTS IN DATA, MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE"

THANK YOU

If you have
a business
problem to
solve, we
can 'Build It!'

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