Welcome to ineuron.ai


Data Science Industry Ready Projects

**Description:**

Ready to use end-to-end data science projects for real-world business use cases. We will be discussing projects from very scratch such as understanding problem statements, capturing requirements, and various aspects of project design using different documentation such as High-Level Design, Low-Level Desing, and Architecture Design. Practical use of MLOPS practices using tools such as MLFLOW, Wandb. Pipeline implementation for training, retraining, and inferencing. Designing dashboard to present important KPIs to monitor system and model performance and generate alert to notify the appropriate parties to address serious problems if it is about to occur.

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| **Start Date:** | 24th September 2022 |
| **Doubt Clear Time:** | 08:00 PM to 10:00 PM (IST) Wednesday & Thurs |
| **Course Time:** | 10:00 AM - 01:00 PM (IST) Saturday - Sunday |

**Features:**

# Online Instructor-led learning

# Doubt Clearing

# Proper Roadmap for building AI projects

# Lifetime Dashboard access

# Recording of Live Class

# Material

# Interview Questions

# Resume Building

# Career Guidance

# Quiz in every module - Based on Real Time Questions

# Certificate

# Industry Level Projects and Case studies

# Capstone Projects

**What we learn:**

# System Architecture

# High Level Design

# Component Selection

# Low Level Design

# Core utility deisgn

# Deployment Architecture

# Mutistage pipeline for CI/CD

# ML Pipeline Understanding

# Training Pipeline Implementation

# Inference Pipeline Implementation

# Retraining Pipeline Implementation

# Deployment of ML Pipeline on Cloud

# Monitoring of System and Model Performance

**Requirements:**

# System with Internet Connection

# Interest to learn

# Dedication

# Knowledge of Python

# Knowledge of Machine Learning

**Instructor:**

**Name:**

krish naik

**Description:**

Having 10+ years of experience in Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

**Name:**

Sudhanshu Kumar

**Description:**

Having 8+ years of experience in Big data, Data Science and Analytics with product architecture design and delivery.

Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

**Name:**

Avnish Yadav

**Description:**

3+ years of experience in various domains such as data scientist, data analyst, database developer, and .net developer. Implemented various sophisticated business requirements, performed an analysis of various data to capture insights and hidden patterns. Fine and tuned various regression and classification-based algorithms for prediction. Implemented various ETL pipelines to fulfil the business requirement. Automated various machine learning pipelines such as data loading, data cleaning, data validation, model selection, model tuning, and model monitoring pipeline. Implemented machine learning pipeline in azure machine learning studio. I have a keen interest to solve complicated machine learning problems to fulfil business requirements.

**Name:**

Ketan Gangal

**Description:**

I have worked in data science for more than two years, and I have a track record of successfully implementing data science

pipelines in production with practical expertise using ML-Ops, deep learning & machine learning. I also Love sequence Processing because it is deeply inspired by humans as our feeling, thoughts, emotions, sensations, language are sequential in nature if we can enable machine to understand sequence of information and act accordingly we can make significant progress towards true artificial intelligence.

**>Project - Sensor Fault Detection:**

>>Project Introduction

>>Project Business Use case

>>System Architecture

>>High Level Design

>>Component Selection

>>Low Level Design

>>Core utility deisgn

>>Deployment Architecture

>>Mutistage pipeline for CI/CD

>>Technology Stack

>>Python, Pandas, Sklearn, Mlflow, Cloud, Prometheus and Grafana, Docker, RDBMS,

>>ML Pipeline Understanding

>>Type of ML Pipeline

>>Training Pipeline

>>Inferencing Pipeline

>>Retraining Pipeline

>>Training Pipeline Implementation

>>Introduction to Training Pipeline

>>Data Ingestion From Data Source

>>Data Validation

>>EDA, Data Preprocessing, Feature Engineering Model Selection

>>Customize Model Training

>>Model Training, Selection and Hyperparameter Tuning

>>Model Analysis and Evaluation

>>Model Push/ Export

>>Inference Pipeline Implementation

>>Introduction to Inference Pipeline

>>Understanding of the use of Artifact Generated by Training Pipeline

>>Data Validation

>>Data Preprocessing and Feature Engineering

>>Prediction using preprocessed data

>>Retraining Pipeline Implementation

>>Introduction to Retraining Pipeline

>>Model Analysis and Performance Monitoring of Prediction Pipeline

>>Creating Trigger to Initiate Model Retraining

>>Deployment of ML Pipeline on Cloud

>>Schedule and Orchestrate Training Pipeline

>>Deployment of Inference Pipeline as an API

>>Deployment of Retraining Pipeline

>>Monitoring of System and Model Performance

>>Importance of Monitoring

>>Visualization of KPI and Other Indicator

>>System and Model Performance Visualization

>>Implementation of Alert and Notification to prevent Failure

>>Project Conclusion

**>Project - Financial Product Complaint:**

>>Project Introduction

>>Project Business Use case

>>System Architecture

>>High Level Design

>>Component Selection

>>Low Level Design

>>Core utility deisgn

>>Deployment Architecture

>>Mutistage pipeline for CI/CD

>>Technology Stack

>>Python, Pytorch,Cloud, Prometheus and Grafana, Docker, RDBMS, Cloud Storage, F

>>ML Pipeline Understanding

>>Type of ML Pipeline

>>Training Pipeline

>>Inferencing Pipeline

>>Retraining Pipeline

>>Training Pipeline Implementation

>>Introduction to Training Pipeline

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>>Data Validation

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>>Model Analysis and Evaluation

>>Model Push/ Export

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>>Data Validation

>>Data Preprocessing and Feature Engineering

>>Prediction using preprocessed data

>>Retraining Pipeline Implementation

>>Introduction to Retraining Pipeline

>>Model Analysis and Performance Monitoring of Prediction Pipeline

>>Creating Trigger to Initiate Model Retraining

>>Deployment of ML Pipeline on Cloud

>>Schedule and Orchestrate Training Pipeline

>>Deployment of Inference Pipeline as an API on Elastic Container Serving

>>Deployment of Retraining Pipeline

>>Monitoring of System and Model Performance

>>Importance of Monitoring

>>Visualization of KPI and Other Indicator

>>System and Model Performance Visualization

>>Implementation of Alert and Notification to prevent Failure

>>Project Conclusion

**>Project - Face Authenticator:**

>>Project Introduction

>>Project Business Use case

>>System Architecture

>>High Level Design

>>Component Selection

>>Low Level Design

>>Core utility deisgn

>>Deployment Architecture

>>Mutistage pipeline for CI/CD

>>Technology Stack

>>Python, MongoDB, Deepface, Flask, Docker, EC2 Instance, Git, Github, SQL

>>Face Authenticator Pipeline

>>Understanding Face Authenticator mechanism

>>Face Registration Pipeline

>>Face Indentification Pipeline

>>Face Registration Pipeline

>>Capturing Images of a Person

>>Generating Embedding of Facial Image

>>Save Embeddding in Database

>>Face Identification Pipeline

>>Detecting face of a Person at login portal

>>Generate embedding of captured face

>>Search Generated Embedding in DB using simillarity metrics Triplet Loss

>>Monitoring of System and Model Performance

>>Importance of Monitoring

>>Visualization of KPI and Other Indicator

>>System and Model Performance Visualization

>>Implementation of Alert and Notification to prevent Failure

>>Project Conclusion

**>Project - Embedding based search engine:**

>>Project Introduction

>>Project Business Use case

>>System Architecture

>>High Level Design

>>Component Selection

>>Low Level Design

>>Core utility deisgn

>>Deployment Architecture

>>Mutistage pipeline for CI/CD

>>Technology Stack

>>Python,Pytorch, Hugging Face, Transformer, Prometheus and Grafana, Docker, RDB

>>ML Pipeline Understanding

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>>Retraining Pipeline

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>>Project Conclusion

**>Project - AI Based Hybrid Recommender System :**

>>Project Introduction

>>Project Business Use case

>>System Architecture

>>High Level Design

>>Component Selection

>>Low Level Design

>>Core utility design

>>Deployment Architecture

>>Multistage pipeline for CI/CD

>>Technology Stack

>>Python,Pytorch, Transformer, Prometheus and Grafana, Docker, RDBMS, Cloud Sto

>>ML Pipeline Understanding

>>Type of ML Pipeline

>>Training Pipeline

>>Inferencing Pipeline

>>Retraining Pipeline

>>Training Pipeline Implementation

>>Introduction to Training Pipeline

>>Data Ingestion From Data Source

>>Data Validation

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>>Project Conclusion